ENVIRONMENTAL ASSESSMENT

Communications-Electronics Research, Development and Engineering Command (CERDEC) Flight Activity Facility at the Joint Base McGuire-Dix-Lakehurst, New Jersey

Prepared for:

ARMY CERDEC FLIGHT ACTIVITY
JB MDL, BUILDING 194
LAKEHURST, NJ 08733

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Finding of No Significant Impact (FONSI)
And
Environmental Assessment (EA)
For
Communications-Electronics Research, Development and Engineering Command (CERDEC) Flight Activity Facility (FAF)
Joint Base McGuire-Dix-Lakehurst (JB MDL), Ocean County, New Jersey
January 2013

Major Federal actions that have the potential to significantly affect the quality of the human and/or natural environment must be reviewed in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 USC §4321-4375) and applicable laws. The United States Air Force (herein, AF), JB MDL has completed an Environmental Assessment (EA) analyzing the impacts of the Proposed Action and reasonable alternatives for the CERDEC FAF. After carefully considering the EA, the Proposed Action will not have a significant impact on the human environment. This FONSI incorporates the attached EA for the CERDEC FAF.

Description of the Proposed Action

The CERDEC proposes to construct and operate a new FAF within the boundaries of the JB MDL, allowing it to safely and efficiently continue and potentially expand their mission capabilities of developing and integrating Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance technologies, while maintaining access to airspace assets and a low interference frequency spectrum environment necessary for their operations. The proposed FAF would provide high and low aircraft hangar bays, maintenance and fabrication shops, storage areas, offices, meeting space, as well as airfield apron area, a helicopter landing spot, and new taxiway for runway access.

Alternatives Considered

Alternatives considered include:

1) Proposed Action. CERDEC would construct a new FAF on 37 acres adjacent to Maxfield Field within Parcel 22 described in the Lakehurst Vision Plan. This alternative, with potential future expansion, would relocate most of the core CERDEC operations into a modern facility, while retaining specialized stand-alone buildings within Hangar 5 and overflow aircraft parking area on the Hangar 5 deck.

2) No Action Alternative. CERDEC would not construct a new FAF within the boundaries of JB MDL, and would maintain their current location within Hangar 5. Under the No Action Alternative, CERDEC and JB MDL would continue to fund and implement repairs to the building in a phased approach as maintenance and repair funding is available.

3) Alternatives Considered, but Eliminated from Detailed Analysis Based on Reasonable Selection Standards include:

a. Relocate CERDEC to another hangar within JB MDL.
b. Construct the FAF at other locations along Mat 3 at JB MDL.
c. Construct the FAF near the McGuire airfields within JB MDL.
d. Relocate the CFA at or near the Aberdeen Proving Ground.
e. Construct the FAF at a public regional airport in NJ.

The EA includes an environmental impacts analysis of the Proposed Action and Reasonable Alternatives.

Public Review and Comment
The NEPA process is designed to involve the public in the federal decision making process. Public involvement and intergovernmental coordination and consultation are recognized as essential elements in the development of an EA. Formal notification and opportunities for public participation, as well as informal coordination with government agencies and planners, are an essential part of the EA process.

The Draft EA and Draft FONSI were furnished to the US Fish and Wildlife Service, US Environmental Protection Agency, NJ Department of Environmental Protection, NJ Historic Preservation Office, NJ Pinelands Commission, and Ocean County Planning Department, Delaware Nation and Delaware Tribe, and were made available during a 30-day public comment period. The EA was available for public review at the Manchester Branch of the Ocean County Library, 21 Colonial Drive, Manchester, NJ 08759. The Final EA includes copies of comments received and incorporates responses to these comments.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
After a review of the EA and Draft FONSI prepared for the Proposed Action in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality (CEQ) regulations (40 CFR §1500, et. al), the Air Force Environmental Impact Analysis Process (EIAP) (32 CFR §989), and receipt and responses to public comments on the documents, I have determined that the Proposed Action will not have a significant impact on the quality of the human and/or natural environment. Therefore, an Environmental Impact Statement (EIS) does not need to be prepared. This decision has been made after taking into account all submitted information and which also considered an analysis of reasonable alternatives that would meet the purpose and need for the Proposed Action under Air Force authority.

5 Feb 13
Date

TIMOTHY S. GREEN
Brigadier General, USAF
Director of Installations and Mission Support

Attachment:
EA for the CERDC FAF

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List of Acronyms

AFI	Air Force Instruction
AASF	Army Aviation Support Facility
BMPs	Best Management Practices
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance
CAA	Clean Air Act
CEA	Classification Exception Area
CEQ	Council on Environmental Quality
CERDEC	Communications-Electronics Research, Development, and Engineering Command
CFA	CERDEC Flight Activity
CFR	Code of Federal Regulations
CO	Carbon monoxide
dB	Decibel
dBA	Decibel, A-weighted
DNL	Day-Night Level
DoD	Department of Defense
E&S	Erosion & Sedimentation
EA	Environmental Assessment
EO	Executive Order
EOD	Explosive Ordnance Detachment
ESQD	Explosive Safety Quantity-Distance
ESA	Endangered Species Act
FAF	Flight Activity Facility
g	Gram
GSF	Gross square feet
HP	Horsepower
HPO	Historic Preservation Officer
I2WD	Intelligence and Information Warfare Directorate
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
JB MDL	Joint Base McGuire-Dix-Lakehurst
KVA	Kilo-volt amperes
LEED	Leadership in Energy and Environmental Design
LEMV	Long-Endurance Multi-Intelligence Vehicle
LiMA	Light Mobility Aircraft
Lb	Pound
LTA	Lighter-Than-Air
MEC	Munitions and Explosives of Concern
mm	millimeter
MMBTU	Million British Thermal Units
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NJ	New Jersey
NJAC	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJSA	New Jersey Statutes Annotated
NOA	Notice of Availability
NOx	Nitrogen oxides
NRHP	National Register of Historic Places
PM	Particulate matter
RONA	Record of Non-Applicability
SEL	Single Exposure Level
scf	Standard cubic feet
sf	Square feet
SHPO	State Historic Preservation Office
SO_2	Sulfur dioxide
SSA	Sewer service area
tpy	Tons per year
USAR	Urban Search and Rescue
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound

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1. PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

The Army Communications-Electronics Research, Development and Engineering Command (CERDEC) Flight Activity (CFA) proposes to construct and operate a Flight Activity Facility (FAF) on Parcel 22 near the approach end of Runway 24 (Federal Aviation Administration Airport identifier "NEL") at Lakehurst/Maxfield Airfield, Joint Base McGuire-Dix-Lakehurst (JB MDL). JB MDL is located in Central NJ and the proposed project would be located in the portion of the Joint Base that borders Jackson Township, NJ (see Figure 1-1).

The proposed FAF would provide high and low aircraft hangar bays, maintenance and fabrication shops, storage areas, and office/meeting space, as well as airfield apron area, a helicopter landing spot, and new taxiway to access the Lakehurst/Maxfield Airfield 06/24 runway.

1.1.1 Environmental Assessment Framework

This Environmental Assessment (EA) has been prepared to document the potential for environmental impacts resulting from proposed construction and operation of a new FAF at the JB MDL. This EA has been prepared under the provisions of, and in accordance with, the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 *et seq*.), Council of Environmental Quality [CEQ] Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 32 CFR 989 (*Air Force Environmental Impacts Analysis Process*).

1.1.2 CERDEC Flight Activity Operations

The CERDEC CFA at JB MDL is a component of CERDEC's Intelligence and Information Warfare Directorate (I2WD). CERDEC's I2WD's goal is to develop and apply emerging technology that will significantly advance the Soldier's fighting capabilities now and in the future (CERDEC, 2011).

The CFA employs approximately 225 personnel, of which approximately 185 are contractors. This workforce includes 13 pilots, who are both fixed wing and rotary wing qualified with a fleet of 15 aircraft including UH-60, UH-1, C-12, C-23 and unmanned-aerial vehicles.

1.1.3 Existing Facility Conditions

The CFA has been conducting operations within Hangar 5 east of the Lakehurst/Maxfield runways adjacent to Mat 3 for the last four decades. The CFA occupies approximately 66,000 sf of administrative space and 210,000 sf of hangar deck space within Hangar 5. The CFA provides end-to-end aviation support for emerging C4ISR technologies, quick reaction capabilities to units and post-production aircraft modifications for program executive offices and project managers. The CFA also has in-house shop space for machining, fabricating parts, finishing and painting.

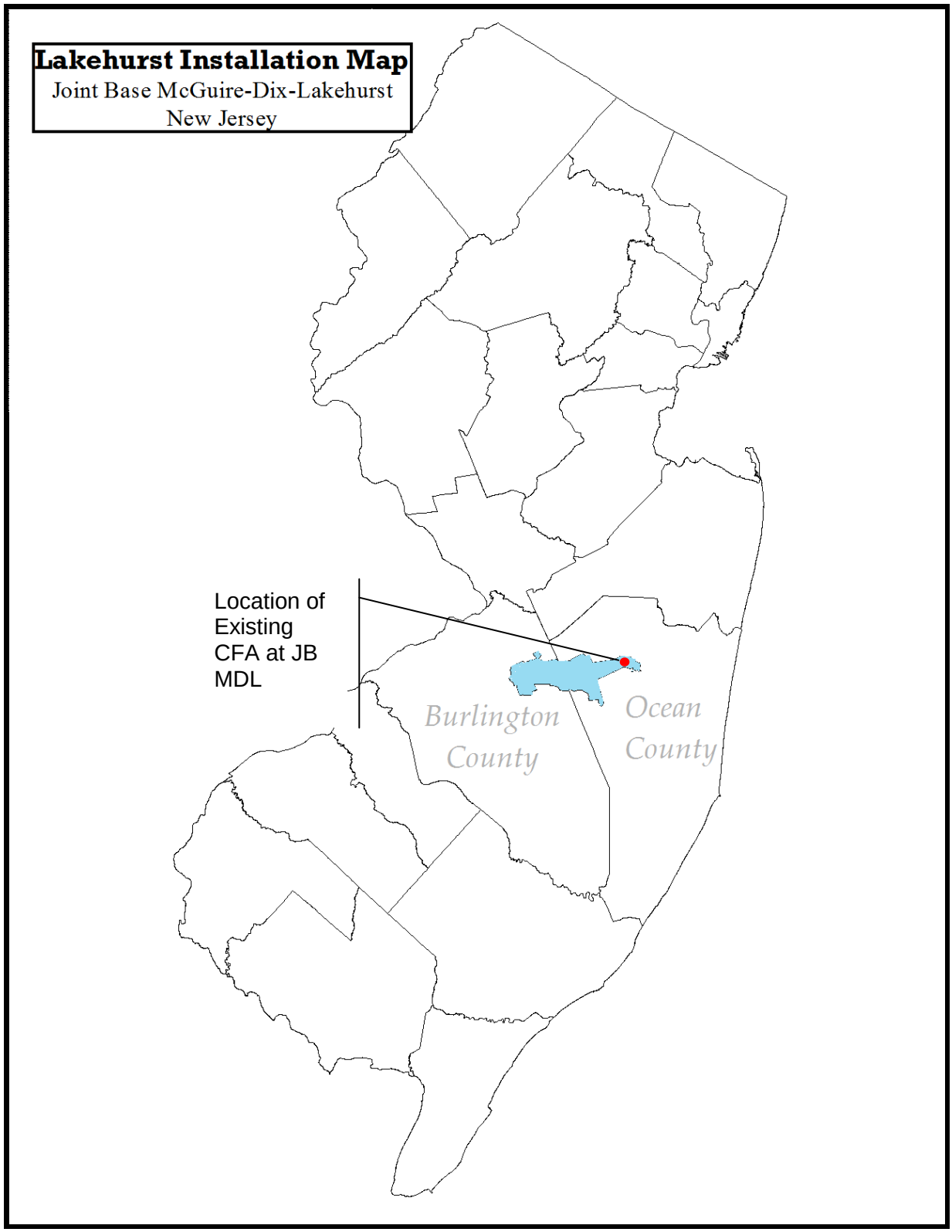

Figure 1-1. Location of JB MDL in New Jersey

Hangar 5 (see Figure 1-2, forefront) was constructed in 1942 along with its twin hangar, Hangar 6, southwest of Mat 1 and east of the Lakehurst/Maxfield runways. Hangars 5 and 6 are considered among the largest arched wooden structures in the world. Constructed primarily of Western Douglas Fir due to a shortage in steel during World War II, the hangars were designed to house non-rigid airships used by the Navy for patrol operations. The pair was one of similar hangars constructed for the Navy across the U.S. during World War II.

Both hangars are considered historic properties eligible for listing to the National Register. They are core contributing structures to the eligible Lighter-Than-Air (LTA) Historic District, where "core" facilities are those that illustrate important elements of Lakehurst's historic aviation mission, are integral to the architectural character of the District, or are key components of the original 1921 station plan (NAES, 2006). In 1996, the State Historic Preservation Office (SHPO) concurred with a finding that the LTA Historic District was eligible for inclusion in the National Register (NJDEP, 1996).

The dimensions of Hangar 5 are 1,086 feet long by 297 feet wide by 183 feet high. The hangar is sided with corrugated aluminum siding, and the monitor and barrel roofs are covered with single-ply rubber (NAES, 2006).

Figure 1-2. Hangars 5 and 6

The building footprint is approximately 340,000 square feet (sf). The hangar is divided into two main areas:

- Hangar/Aircraft Parking Area (approximately 240,000 sf)
- "Lean to" north and south, two stories of offices and shops (approximately 100,000 sf)

In 2006, a study of Hangar 5 was conducted to determine the extent and costs of all the repairs needed to bring the facility up to current building codes, including fire codes (URS, 2006). The resulting report stated that needed repairs would cost approximately $53M in 2006 dollars (estimated at $58.8M in 2011 dollars[1]). The study identified issues with the lack of a foam fire suppression system, life safety code deficiencies, inadequate power supply and wiring code violations, and identified other areas where repairs or assessment are needed.

The JB MDL will be conducting an engineering study of Hangars 5 and 6 (to be completed by early 2012), to determine the extent of repairs needed and their associated priority and costs (Bros, 2011).

[1] Based on Department of Labor Consumer Price Index data.

1.2 Purpose and Need

The CFA needs a secure, safe, fire and building code-compliant, and energy efficient facility to conduct core research and development that is adjacent to a military airfield where they can conduct low-altitude flying operations within military controlled airspace, with minimal frequency interference or constraints, and reasonable proximity to off-shore aircraft warning areas to conduct aircraft system research and testing operations. They also need local facilities to support related contractor-provided repair, maintenance and fabrication services.

The purpose of the Proposed Action is to provide adequate and safe facilities for the CFA to continue its mission, as well as capacity to increase the number of aircraft retrofits (see Table 1-1).

Table 1-1. Current and Planned CFA Assets

Assets	Current Total	Planned Total
Civilian Personnel – Core R&D operations	40	40
Contractor Personnel –Core R&D operations	40	40
Contractor Personnel – Repair, maintenance, and fabrication operations[2]	145	130
R&D Aircraft (dedicated fixed wing, rotary wing, and remotely piloted aircraft)	15	15
Temporary Aircraft (temporary aircraft receiving retrofits)	6	10

1.3 Scope and Content of the Environmental Assessment

This Environmental Assessment evaluates the individual and cumulative effects of the Alternative 1 (Build the FAF on Parcel 22, the Preferred Alternative), and Alternative 2 (No Action Alternative).

This EA evaluates Alternatives 1 and 2 with respect to air quality, water resources, transportation, noise, site contamination, biological resources, and cultural resources at JB MDL within their areas of potential effect.

1.4 Decisions to be Made

As the action proponent, the CFA's decision is the selection of either Alternative 1 (build a new FAF) or Alternative 2 (No Action alternative). As the installation manager, the JB MDL's decision is whether or not to agree to the long-term commitment of land necessary to build a new FAF, if the CFA chooses Alternative 1.

[2] Non-core R&D contractor functions will not be moving to the new FAF and will continue to be housed in the stand-alone buildings within Hangar 5 that include the "DARISSA" hangar (approximately 60,000 GSF) and an anechoic chamber (2,000 GSF). The numbers of contractors can vary with workload levels. The CERDEC CFA currently houses approximately 50 contractors in temporary aircraft shelters on the west end of Lansdowne Road, north of Hangar 5. These operations will be reduced to 35 personnel prior to the completion of the proposed FAF facility in 2015. For planning purposes, the CFA predicts up to 130 contractor personnel would continue to utilize the standalone buildings within Hangar 5.

1.5 Agency and Public Participation

Public participation is a significant component of the NEPA process. The following provides a listing of key public notification and participation events that have and will occur as part of this environmental review process:

- The JB MDL, in conjunction with the CFA, conducted interagency and intergovernmental coordination for environmental planning pursuant to the requirements of NEPA as required under Executive Order (EO) 12372, which has since been superseded by EO 12416 – *Intergovernmental Review of Federal Programs*, and subsequently supplemented by EO 13132. The EA provides a list of agencies and individuals contacted during Interagency and Intergovernmental Coordination for Environmental Planning process (Chapter 9). Copies of the letters received from the respective agencies and individuals are included in **Appendix A**.
- The JB MDL Commanding Officer sent a letter to the NJ Pinelands Commission citing the National Defense Exemption (per N.J.A.C. 7:50-4.52(d)) to opt out of compliance with the Pinelands Comprehensive Management Plan requirement to submit a development application for the project. A copy of the letter is provided in Appendix A.
- The Commanding Officer, in September 2011, invited three federally-recognized tribes (Delaware Nation, Delaware Tribe of Indians, and the Stockbridge Munsee Community) to engage in government to government (G2G) consultation. Thereafter, for a different project, the Stockbridge Munsee indicated on December 9, 2011 that JB MDL was not in a county the tribe had an interest in. The Delaware Nation and Delaware Tribe of Indians expressed interest in G2G consultation with JB MDL and were provided information on this project to include the EA plus follow-on communications providing clarifications to project activities. The Delaware Tribe reviewed this EA and stated no objection to the Proposed Action on September 7, 2012. The Delaware Nation responded on December 17, 2012 that the location of the project did not endanger known sites of interest to their tribe. The Stockbridge Munsee Community have consistently informed JB MDL that the project site and activities do not present any interest or concerns of cultural or religious significance to warrant any further discussions or consultations. The project site is located in a area that is unlikely to contain remains of Native American sites; however, if Native American remains or cultural objects are discovered at the proposed project site from normal operations or ground disturbing activities such as the construction or operation of the facility, or erosion by wind or water, the JB MDL would be required to immediately cease all construction activity, secure the site and contact the JB MDL Cultural Resources Manager, the NJ State Historic Preservation Officer, and the Federally-recognized Tribes with cultural affiliations to the proposed site per the Native American Graves Protection and Repatriation Act (25 USC §3001 et seq.), and in accordance with the approved Standard Operating Procedure titled "Inadvertent Discovery of Archeological Resources or Burials" in the Lakehurst Integrated Cultural Resources Management Plan (ICRMP) (NAES, 2006).
- JB MDL published and distributed the Draft EA for a 30-day public comment period. The mailing list for the Draft EA is provided in Chapter 10. Notification of the availability of the Draft EA was accomplished through publication of a legal Notice of Availability (NOA) in the *Asbury Park Press* and the *Burlington County Times*, the local newspapers that service the JB MDL region (Appendix C). Upon distribution of

the Draft EA to the public, copies of the Draft EA and important reference documents were made available for public review at the Manchester Branch of the Ocean County Library. The JB MDL Public Affairs Officer was the primary point of contact for any inquiries from the local news media.

- The JB MDL received responses and/or comment letters from interested parties in association with the public circulation of the Draft EA. Copies of received responses/comments on the Draft EA, as well as responses to these comments, are provided in Appendix D.

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The CFA proposes to construct and operate a new FAF within the boundaries of the JB MDL, allowing them to safely and efficiently continue and potentially expand their mission capabilities of developing and integrating C4ISR technologies while maintaining access to airspace assets and a low interference frequency spectrum environment necessary for their operations.

2.2 Alternatives Considered

NEPA, CEQ regulations, and 32 CFR 989 require that all reasonable alternatives be rigorously explored and objectively evaluated. In addition, alternatives that are eliminated from detailed study must be identified with a brief discussion of the reasons for their elimination.

The following presents reasonable selection standards used to identify a possible site on which to locate the proposed FAF. For the purposes of this discussion, an alternative was considered "reasonable" only if it meets the following standards:

- Standard A - Site Specifications (size). This includes:
    - Space for 100,000-108,000 gross square feet (GSF) of building space with the potential to expand by an additional 30,000 GSF (for a total of 138,000 GSF).
    - Space for approximately 240,000 sf of paved apron area.
    - Space for a helicopter departure/landing spot.
- Standard B - Location:
    - A site within the boundaries of an existing military installation to provide an additional level of security to the proposed FAF.
    - A site that accommodate a taxiway onto an existing runway.
    - A site with access to restricted military airspace that is also within reasonable distance (100 nautical miles) of offshore aircraft warning areas where low-altitude flights can be conducted.
    - A site where frequency interference or restrictions are minimal.

These standards were utilized in the evaluation of the alternatives reviewed. Unreasonable alternatives were those that would not meet the aforementioned standards.

2.3 Alternative 1

Alternative 1 would construct a new FAF on 37 acres within Parcel 22 described in the Lakehurst Vision Plan (see Figure 2-1). This alternative meets the "reasonable" selection standards presented in Section 2.2. Further, the *Project Planning Document Charrette for the CERDEC Flight Activity Facility (FSB, 2010)* determined that this area would accommodate at least two site layouts of the FAF under Standard A with potential for 30,000 GSF of future building expansion. This alternative, with potential future expansion, would relocate most of the

core CERDEC operations into a modern facility, while retaining specialized stand-alone buildings within Hangar 5 and overflow aircraft parking area on the Hangar 5 deck.

Parcel 22 is located within the eastern portion of the JB MDL, southeast of Runway 24 (see Figure 2-1). The site is relatively flat and primarily forested. The site is bounded by Runway 24 to the north, the former rifle range and Calnan Road on the east, Rounds road to the south, and a recycling/cryogenics complex to the west. Parcel 22 is located outside of the eligible Lighter-Than-Air (LTA) Historic District (Figure 3-8).

A new FAF would cost an estimated $47M. The construction phase of the facility would begin in FY 2013 and last up to 2 years. Site preparation would require tree removal and grading of the site to a level condition (40 acres of soil disturbance, with 37 acres of tree removal). Utilities including potable water, sanitary sewer, natural gas, telephone and communications lines would be extended to the site. The building would be designed and constructed to meet Leadership in Energy and Environmental Design (LEED) Silver level criteria. The building footprint and aircraft mat would be located outside the Explosive Safety Quantity-Distance (EQSD) arc for the magazine to the east of the site.

Key building elements would include:

- Building area: 101,000 to 108,000 sf (nominal distribution of space: hangars 76,000 sf; shops 13,600 sf; administrative space 10,400 sf; support facilities 8,000 sf. Under a future expansion scenario to 138,000 GSF, the distribution would be: hangars 106,000 sf; shops 13,600 sf; administrative space 10,400 sf; support facilities 8,000 sf; building factor of 18,000 sf).
- A paint booth and indoor wash rack.
- Paved taxiway to the runway: 96,000 sf
- Paved apron for aircraft parking: 250,000 sf (with possible expansion to 300,000 sf)
- Parking spaces for employee vehicles: 100
- Utility connections (electric service, water and sewer, natural gas, phone and communication lines).
- Support facilities including security fencing surrounding the entire complex, paving, sidewalks, curbs and gutters, stormwater collection, site improvements, and anti-terrorism/force protection measures.
- Two outdoor above-ground water tanks for fire protection in conjunction with a High Expansion Foam system.
- A diesel-powered backup generator.

The exterior building materials would comply with the architectural compatibility standards for the JB MDL Lakehurst/Maxfield Field area. The hangars would be predominantly clad in a foam-insulated sandwich metal wall panel. For diffuse natural light, insulated translucent wall panels would be incorporated to the extent budget permits. There would be an 8-foot tall impact-resistant masonry base surrounding the entire structure. The roof material would be standing seam metal roof and the color would be in compliance with base standards.

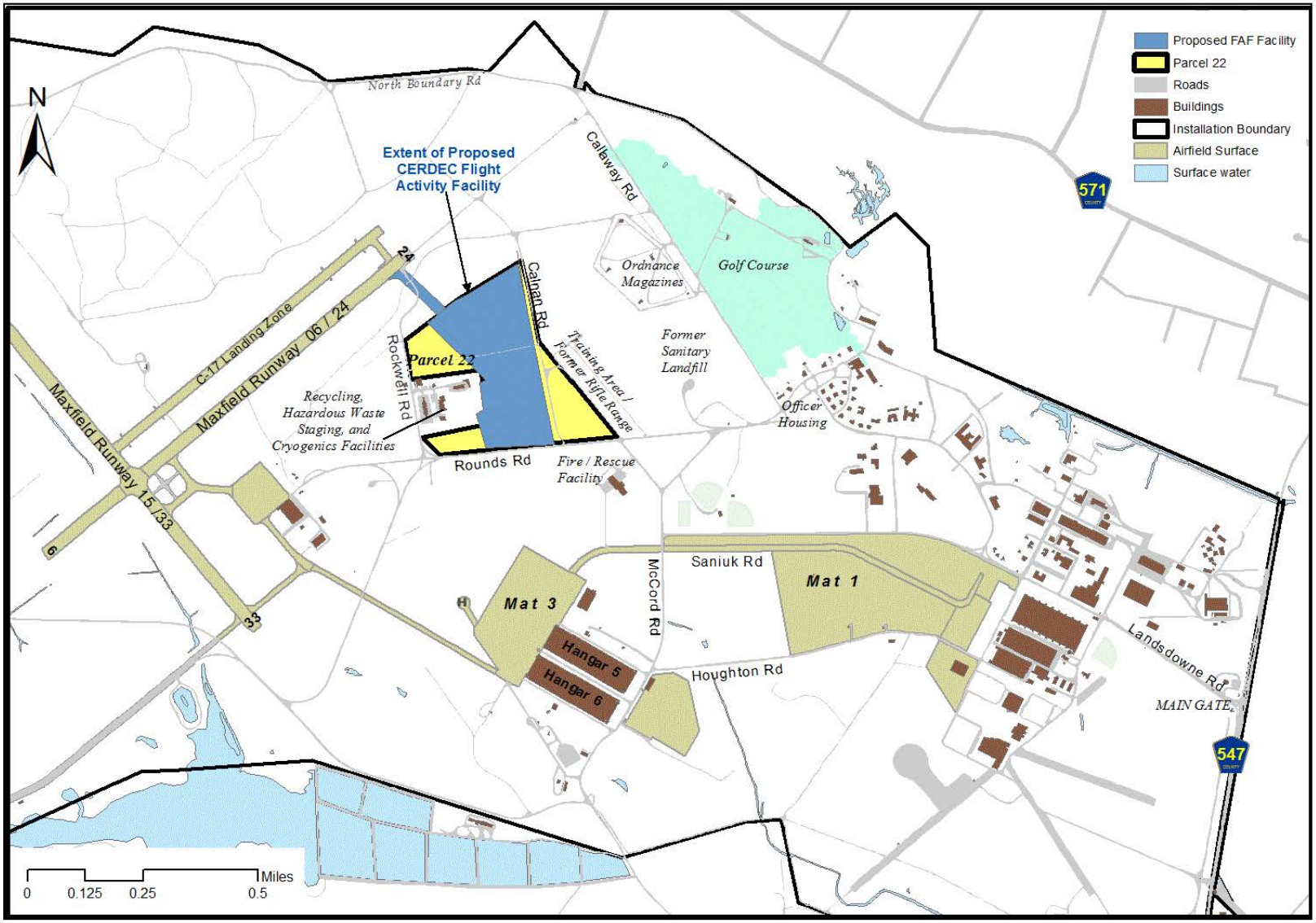

Figure 2-1. Location of Proposed FAF at JB MDL

Under Alternative 1, the CFA would move its core operations out of Hangar 5 except for the two relatively modern, code-compliant stand-alone buildings dedicated to its contractor operations within the hangar that can accommodate approximately 140 personnel. The CFA may negotiate an agreement with JB MDL to continue to utilize portions of the Hangar 5 deck area for overflow storage and temporary aircraft storage when no other facility is available to facilitate needed Quick Reaction Capabilities operations. A comparison of the building square footage utilized under Alternative 1 versus their existing condition is provided in Table 2-1.

Table 2-1. Facility Square Footage, Current and Planned

Location	Current Facilities (sf)[3]	Proposed Facilities (sf)
Current Facilities		
Hangar 5 lean-to/ office/ shops	100,000	NA
Hangar 5 hangar deck	178,000	178,000[4]
Hangar 5 DARISSA Building and anechoic protection	62,000	62,000
Proposed Facilities		
Proposed FAF office/ shop space	NA	32,000
Proposed FAF hangar space	NA	106,000
Total Space	**340,000**	**378,000 (11% expansion)**

Under Alternative 1, the CFA would have the ability to conduct retrofits on up to 10 aircraft at one time instead of 6. While the types of work conducted on each aircraft would vary, for environmental analysis purposes, it is assumed that 4 additional aircraft would arrive and depart on a weekly basis under the Proposed Action, resulting in 1-2 additional aircraft operations per day at Lakehurst.

2.3.1 Construction Requirements

The Proposed Action would incorporate the following measures to comply with the laws, regulations, Executive Orders, instructions, and policies that apply to the JB MDL:

- A site-specific Erosion and Sedimentation Control Plan would be submitted to the Ocean County Soil Conservation District Office for review and approval. The plan would receive certification from the District prior to initiating construction[5].

[3] Under a Cooperative Research and Development Agreement between Northrop Grumman, and U.S. Army Space and Missile Defense Command/U.S. Army Forces Strategic Command, and the CFA, a portion of Hangar 6 is temporarily assigned to the CFA for support of the Long-Endurance Multi-Intelligence Vehicle (LEMV). While the CFA is playing a supporting role in the LEMV program, this temporary support does not alter the CFA's primary mission activities and the CFA is not considered the primary proponent or decision-maker for the program. Consequently, the LEMV program is not considered a CFA activity within the scope of the alternatives of this EA. LEMV activities are addressed under Section 4.16, Cumulative Impacts.

[4] The CFA may require temporary overflow parking of aircraft in Hangar 5 occasionally and would therefore seek to retain the entire hangar deck space. Their need for hangar deck space now and in the future could vary significantly based on mission requirements.

[5] The Erosion and Sedimentation Control Plan would involve measures, including specific guidelines and engineering controls to reduce anticipated erosion and resultant sedimentation impacts from the construction of the FAF. Measures may include use of filter fences, sediment berms, interceptor ditches, and/or other sediment control structures, and seeding/re-vegetation of areas temporarily cleared of vegetation. Re-vegetation plans and requirements included in the control plan should include planting during the optimum seeding season, whenever possible. Use of native grasses for re-vegetation should be addressed in the plan as required under the provisions of the Pinelands Comprehensive Management Plan. No plant materials should be used from

- A new infiltration basin would be constructed to collect stormwater near the northeast portion of the site. Stormwater would be managed in accordance with NJAC 7:8 and applicable portion of the Energy Independence and Security Act of 2007.
- The JB MDL would seek bids for the forest products removed from the site in accordance with AFI 32-7064 (Air Force, 2004).
- The CFA would design and operate the new FAF in accordance with LEED Silver criteria per the Air Force and Army Sustainable Design and Development Policies. The final LEED design elements have not been decided, but likely elements for the FAF include (but are not limited to):
    - bicycle storage;
    - preferred parking for low-emitting and fuel-efficient vehicles;
    - stormwater design;
    - no potable water used for irrigation;
    - water use reduction of 40 percent;
    - optimize energy performance (30 percent improvement);
    - recycle or salvage 75 percent of building construction waste;
    - incorporate building materials with at least 10 percent recycled content;
    - obtain at least 20 percent of construction materials regionally;
    - use of low-emitting materials;
    - controllability of lighting;
    - controllability of thermal comfort; and
    - employing a LEED accredited professional during design and construction.
- In the case of inadvertent discovery of prehistoric or historic artifacts during site construction activities, all construction activities would cease, the site would be secured and the JB MDL Cultural Resource Manager would contact the NJ State Historic Preservation Office (NJ SHPO) and federally recognized tribes as applicable as outlined in the base ICRMP within 24 hours.
- Prior to the performance of any activities involving digging, drilling grading, or other subsurface disturbance activity, the CFA would contact NJ One-Call.
- The construction contract would provide clear instructions to contractors on the steps to follow if unexploded ordnance (UXO) is discovered. A pre-construction safety brief would be provided by JB MDL to the contractor team outlining how to recognize UXO and the steps to follow. If UXO is discovered, all work would cease, workers would muster at an off-site location, and the discovery would be reported immediately to the base dispatch office at 732-323-4000.
- In the event of a hazardous material or petroleum spill during construction activities, the contractor and/or CFA would immediately contact the base Dispatch Office at 732-323-4000 in accordance with base spill response policy.

species considered invasive as defined by EO 13112; regionally native plant species should be favored as required by EO 131148.

2.3.2 Sustainable Design and Construction Best Management Practices

In addition to the measures described in 2.3.1, the CFA would incorporate the following sustainable design elements and construction best management practices as part of the Proposed Action to further avoid or minimize potential environmental impacts:

- No floor drains would be provided in the hangar floor in order to eliminate the requirement for oil water separators and remove the potential for hazardous material spills to enter the sanitary sewer system. The proposed wash rack would collect and recycle wastewater.
- Condensate drains for compressed air systems in the shops and hangar bays would include above-ground oil/water separators prior to water discharge to the sanitary system.
- No aircraft fuel storage would occur on the new FAF site; the CFA would continue to receive fuel from the centrally managed fuel farm operation located south of Hangar 6.
- The facility would connect to existing sanitary sewer lines where treatment is provided by the Ocean County Utilities Authority.
- Dust suppression would be used during construction activities to reduce air pollution. Recommended methods include: application of water, soil stabilizers, or vegetation; use of wind break enclosures; use of covers on soil piles and dump truck loads; use of silt fences; and suspension of earth-movement activities during high-wind conditions (gusts exceed 25 miles per hour).
- During construction, use of electricity from power poles would be used preferentially over use of generators. All generator use would be pre-approved by JB MDL air quality manager and in accordance with applicable NJDEP permit conditions.
- Tree cutting would be conducted outside the migratory bird breeding season of March 15 through July 31.
- JB MDL natural resources specialist(s) would periodically monitor the site during land clearing operations for the presence of special status species, particularly the Northern Pine Snake (State-Threatened). If any are discovered, construction personnel would be required to contact the Natural Resources Manager at 732-323-2911. The Natural Resources Manager specialist would attempt to capture and relocate them to other suitable habitat on the base (north of the Maxfield runways).
- JB MDL would create artificial hibernacula for Northern Pine Snakes in similar forest-type areas north of the Lakehurst Airfield or west of the Test Runway to compensate for minor foraging habitat loss resulting from the construction of the FAF. The JB MDL Natural Resources Manager contacted the NJ Division of Fish and Wildlife Endangered and Nongame Species Program with the location and details of this effort as requested in the NJDEP letter of September 27, 2011 (Appendix D). The design is also provided in Appendix D.
- To reduce the potential for spills during construction, the CFA contractor would:
    - Inspect equipment and vehicles for leaks daily.
    - Refuel equipment over paved areas.
    - Not wash down construction vehicles (except bucket attachments) on-site.

  - Store hazardous materials and wastes in a manner that provides secondary containment in the event of a spill.

- To reduce the potential for litter and Foreign Object Damage hazard at nearby runways by, the construction contractor would:
  - Store materials securely, off the ground and under cover so they are not damaged or displaced by rain or high winds.
  - Ensure dumpsters have covers and that covers are in place when not in use.
  - Inspect the work site at the end of each work day to collect litter and organize materials.

2.4 Alternative 2 – No Action Alternative

As required under NEPA, CEQ Regulations, and 32 CFR 989, the No Action Alternative (Alternative 2) is retained in this EA for comparative analysis. Under the No Action Alternative the CERDEC would not construct a new FAF within the boundaries of JB MDL, and would maintain their current location within Hangar 5.

The existing facilities currently being used at JB MDL include:

- Runways and parking aprons
- Hangar 5 (Approximately 66,000 sf of administrative space and 210,000 sf of hangar deck)

The CFA operates within Hangar 5 under a Support Agreement with the JB MDL. Prior to the stand-up of the Joint Base, the CFA had a Support Agreement with the Navy for use of Hangar 5 that is still in effect. Under this agreement, the CFA is responsible for all repair and maintenance costs of the facility. Under the No Action Alternative, the CFA would continue to fund and implement emergency repairs to the building as needed and as maintenance/ repair funding is available.

2.5 Alternatives Considered But Eliminated from Further Study

The following alternatives to meet the CFA's needs were considered but were eliminated from further study based on the reasonable selection standards in Section 2.2:

- **Relocate the CFA to another hangar within JB MDL.** This alternative was not feasible as all other building code-compliant hangar facilities within the JB MDL are currently occupied with long-term military tenants.
- **Construct the FAF at other locations along Mat 3 at JB MDL**. Other site locations within the Mat 3 area of JB MDL were also considered but eliminated due to conflicts with existing or planned facilities, and the desire to minimize the potential for non-CFA employees to view the inside of the hangars when the doors are open. While there may be space on the existing mat area closer to Hangar 5, the Alternative 1 location where the hangars face either the Lakehurst/Maxfield Field runway and/or forested areas provides a more secure location.
- **Construct the FAF near the McGuire airfields within JB MDL**. Although there are existing runways at the McGuire airfield, the land along these runways is highly built-up, with little to no land available for a facility the size of the proposed FAF.

- **Relocate the CFA at or near the Aberdeen Proving Ground.** Under the 2005 Base Realignment and Closure decisions, the CERDEC mission at Fort Monmouth NJ will be transferring to Aberdeen Proving Ground, Maryland. The closure decision did not address the current CFA operations at Lakehurst. However, the CFA evaluated the option of relocating to the Aberdeen Proving Ground in order to meet its facility needs. Aberdeen Proving Ground includes the Phillips Army Airfield with runways long enough to accommodate the CERDEC CFA fixed wing assets. However, the eastern shore of Maryland, due to its proximity to the District of Columbia, and presence of other military installations, such as the Patuxent River Naval Air Warfare Center, would severely limit the operations of the CFA due to significant frequency interference, inability to conduct low-altitude flights in the District of Columbia area due to airspace restrictions, and difficulty scheduling operations within the highly utilized local off-shore warning areas by other military users.
- **Construct the FAF at a public regional airport in NJ.** Regional airports within NJ were assessed as potential locations of the proposed FAF; however, the highly sensitive and classified nature of the work performed by CFA requires their facility be located within a secure military installation. Therefore, options for locating the new facility at a private or public airport were eliminated from further consideration.

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3. AFFECTED ENVIRONMENT

3.1 General Overview

This section specifically describes current baseline environmental, cultural, and socioeconomic conditions of an eastern portion of JB MDL. The potential direct, indirect, and cumulative effects of the Proposed Action components and alternatives on each of the resources are addressed in Section 4.

3.1.1 Project Location

The project study area is located in JBMDL (adjacent to Jackson Township), Ocean County, NJ, in the east-central part of the State. The project study area is approximately 45 miles east of Philadelphia, 65 miles south of New York City, 50 miles south of Newark, NJ, and 10 miles west of the Atlantic Ocean. The general location of the proposed FAF site is presented in Figure 1-1.

JB MDL is located within the Pinelands National Reserve, also referred to as the Pinelands. This reserve consists of approximately 1.1 million acres in southern NJ, managed by the NJ Pinelands Commission. The Pinelands National Reserve includes portions of seven counties, including: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Ocean.

The project study area lies near the Lakehurst/Maxfield Field area. Parcel 22 is a 60-acre irregularly shaped forested area situated between an active runway, a State Police training area on a former rifle range, a recycling center and an aviation mat.

3.2 Land Use

Parcel 22 is bounded by a fenced cryogenic and recycling facility to the west, Rounds Road to the south, a former rifle range to the east and Runway 24 to the north.

There is evidence of a man-made, excavated shallow depression in the center of the parcel (roughly 25 by 40 feet to a depth of 4 feet). The depression was the location where two British mortars were discovered on the ground surface in 2001 (see Section 3.14.4.1). Interviews with long-time employee and a records search did not uncover any clues as to what the purpose or use of the depression was. During a site walk-over on April 25, 2011, there was no evidence that this pit holds water (bottom was not wet despite recent rain and no evidence of wetland plant species). A timeline of the build-up of the area surrounding Parcel 22 is provided below based on aerial photographs from the website www.aerialphotographs.com:

- 1931: Hangar 1, Mat 1, several landing circles, and the main cantonment area including Officer's Housing are present. The base is used primarily for airship operations. Parcel 22 is forested and the closest land disturbance is an airship landing circle located 1,000 feet east of what is now Calnan Road. A tributary to the Manapaqua Branch origination at the southern portion of Parcel 22 is clearly visible.
- 1940: Most of the base is blacked out due to security reasons from wartime activities. However, land clearing for the magazine area appears to be underway and blackout extending to the areas of now Hangars 5 and 6 indicates they were under construction. A faint outline of the rifle range east of Parcel 22 is visible. The area within Parcel 22 is still forested.

- 1956: Hangars 5 and 6, which were completed in 1942 are present, in addition to Mat 3, two aircraft circles northeast of Mat 3, the Lakehurst/Maxfield Field runways, the rifle range east of Calnan Road, and a small skeet range is located on a portion of Parcel 22 but outside the footprint of the proposed FAF complex. The skeet range is circular with a diameter of roughly 300 feet, with the firing line just south of the current Rounds Road. The portion of the tributary north of Rounds Road is no longer visible and there is significant land disturbance where this stream was located on the southern side of now Rounds Road.
- 1963: In addition to the features shown in the 1956 photo, the Advanced Underwater Weapons Storage facility (now the cryogenics and recycling facility) is present, with what appear to be successive lines of fire breaks cut through the forest to the north and south of the facility. Lakehurst/Maxfield Field Hangar is also present. Parcel 22 is still forested. The tributary north of Rounds Road is no longer visible. The access road to Lakehurst/Maxfield Field is realigned to approximately 170 feet north of the previous road and now reflects the current location of Rounds Road.

An undated map[6] from the Lakehurst Proving Ground era depicts the project study area as a fenced goat pasture.

3.2.1 Zoning and Land Use Plans

Parcel 22 is located within the JB MDL, within the boundaries of Jackson Township NJ[7]. The Township zones JB MDL as Military Installation, which permits uses associated with the function of the military installation or other essential public service, as long as (1) it is sanctioned by JB MDL, and (2) it substantively meets environmental compliance standards of the Pinelands Comprehensive Management Plan. In addition, it must be demonstrated that such development can be accomplished without adverse impacts to the environmental resources of the Pinelands Area.

In the Pinelands, specific areas have been designated for environmental protection, forestry, and agriculture, with growth being directed and encouraged in and around areas capable of accommodating further development. The Pinelands Comprehensive Management Plan zones the JB MDL as "Military and Federal Installation Area" defined as Federal enclaves within the Pinelands. Permitted uses are those associated with function of the installation or other public purpose uses (NJ Pinelands Commission, 2011).

Parcel 22 is located 3,000 feet south of the nearest base boundary line (to the north). The land to the north of this boundary is sparsely populated. The zoning immediately north is Pinelands Forest Area (between the JB MDL and Route 571), followed by Rural Development Area to the north of Route 571 (see Figure 3-1). Forest Area has a permitted residential density average of one home for every 28 acres. Rural Development Area is a transitional area that balances environmental and development values between conservation and growth areas. Limited, low-

[6] Photocopied map with a hand written title "RG 92, Quartermaster General, Railroad Blueprint File, Folder 14-2", undated. This title refers to the National Archives filing convention for military railroad maps from that era. The Lakehurst Proving Grounds were in operation between 1915 and 1919.

[7] Pursuant to NJSA 52:30-2, Exclusive jurisdiction in and over any land so acquired by the United States is hereby ceded to the United States (by the State of NJ) for all purposes except the service of process issued out off any of the courts of this state in any civil or criminal proceeding.

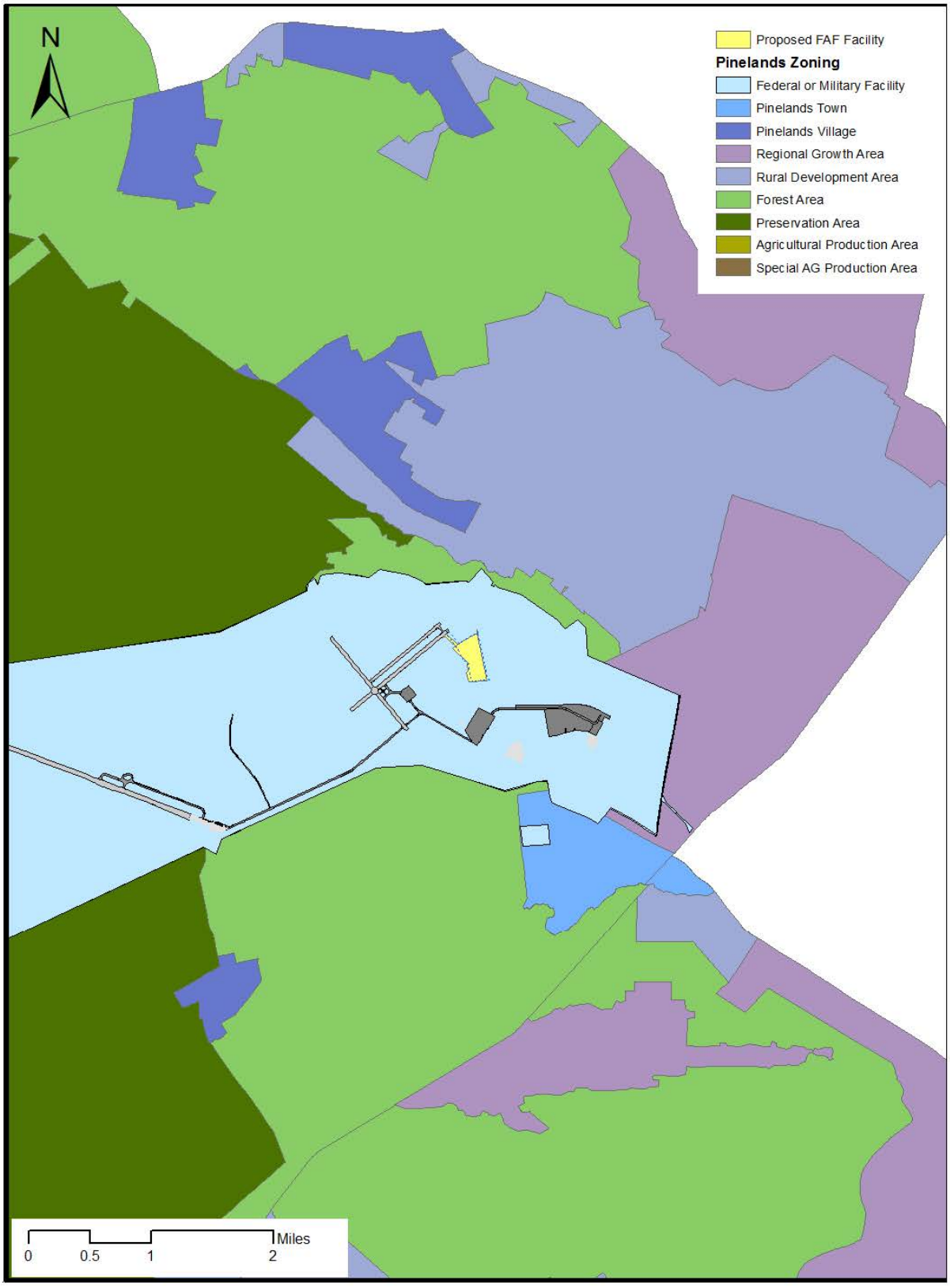

Figure 3-1. Pinelands Zoning

density residential development and roadside retail is permitted. Residential densities average one home for every five acres.

The Lakehurst portion of the JB MDL has a Vision Plan outlining current and future land use (NAES, 2010). The current and future land use designations for Parcel 22 according to the Lakehurst Vision Plan are for Aircraft Operations and Maintenance.

3.2.2 Land Uses Surrounding the Proposed Action

Active land uses (see Figure 2-1) surrounding Parcel 22 within 1 mile of the parcel within the base boundary include:

- Aircraft operations to the north, west and south associated with the Lakehurst/Maxfield Field runways, Hangars 5, 6, and Building 690 and Mat 3;
- A recycling facility/hazardous materials transfer facility, and cryogenics facility adjacent on the western boundary of the parcel;
- A munitions storage area 0.4 miles northeast;
- A 9-hole golf course located 0.75 miles to the east/north-east of the parcel.
- NJ State Police search and rescue training operations on the former rifle range on the adjacent eastern side of the parcel;
- A closed sanitary landfill 0.25 miles east;
- Military Officer Housing area located 0.75 miles to the east;
- A fire/rescue station 0.25 miles to the southeast; and
- Baseball and football fields 0.4 miles to the southeast;

Land uses external to JB MDL within 1 mile of Parcel 22 include:

- Preserved land (forested)
- Approximately 40 single family homes;
- A mobile home park (approximately 30 homes); and
- Amvets Post 2 meeting hall.

3.3 Airspace

3.3.1 Airspace Operations at JB MDL

The airspace above and around the JB MDL is identified as an alert area. An alert area notifies pilots of high-density military aircraft operations within a specified area, and does not restrict aircraft from transitioning the airspace. In addition, two public use airports are located in the vicinity of JB MDL; one approximately 8 miles northeast of the JB MDL airfield, and one approximately 7 miles southeast of the airfield.

Two low altitude Federal airways are located in the vicinity of JB MDL. One passes on a northeast-southwest orientation approximately 5 miles southeast of the airfield, the other passes on a northwest-southeast orientation approximately 8 miles to the north. Low-altitude Federal

airways are used by civilian and military air traffic extending from 1,200 feet above ground level (AGL) up to, but not including 18,000 feet above mean sea level. The eastern edge of the restricted airspace associated with Dix ranges is approximately 5 miles west of the Lakehurst/Maxfield Field. The restricted airspace extends to approximately 8,000 feet above mean sea level. The closest Military Training Route to Lakehurst/Maxfield Field is VR 1709 located approximately 15 miles to the east and 8 miles to the south. The closest offshore military warning area is W-107 located 25 nautical miles to the east of Lakehurst/Maxfield Field.

3.3.2 Airfield Operations at Lakehurst/Maxfield Field

Lakehurst/Maxfield Field contains two paved runways, 06/24 and 15/33. Both runways are 5,000 feet in length and 150 wide. Two helo spots are located within the Lakehurst/Maxfield Field area. Helo Spot 1 is located at the intersection of the two runways and Helo Spot 2 is located on Mat 3.

Aircraft activities at Lakehurst/Maxfield Field include takeoffs, landings, and closed pattern operations on the runways. Aircraft operations at Lakehurst/Maxfield Field are generated by National Guard, Army, and Department of Justice aircraft based at the station, transient aircraft, and aircraft from Air Force installations that use the airfield for practice approaches and landings.

Table 3-1 summarizes the 2010 annual and average daily aircraft operations at Lakehurst/Maxfield Field.

Table 3-1. Annual and Average Daily Aircraft Operations at Lakehurst/Maxfield Field (2010)

Location	Annual Operations	Average Daily Operations
Runways 15/33 and 06/24	5,602	15
C-17 Landing Zone[8]	8,812	24
Helo Spots 1 & 2	2,628	7
Transitions	485	1
Total	17,527	48

Source: Austin, 2011

Helicopter activity at Helo Spot 2, used primarily by CERDEC, was 1,143 operations in 2010, or approximately 95 per month.

3.4 Air Quality

3.4.1 Existing Air Emissions Sources

After the standup of the Joint Base, each of the three previous installations retained their individual Title V permits. The project study area falls within the Lakehurst portion of the JB MDL subject to the Lakehurst Title V permit (#BOP070001) for emission sources. Equipment identified in the Title V permit includes boilers, generators, above ground storage tanks, parts

[8] The C-17 basing EA (AMC, 2005) estimated that the number of C-17 landing zone operations would eventually be 42,085 annually or 115 daily.

washers, heaters, and paint booths. Other sources listed as "insignificant" include parts washers, small generators, diesel fuel storage tanks, a small boiler, a paint booth, and the groundwater treatment air discharge at three remediation sites.

Table 3-2 describes the types of sources and their emissions at Lakehurst.

Table 3-2. Emission Sources at Lakehurst, Tons Per Year, 2010

Type	Number of Sources	CO	NOx	PM	VOCs	SO_2
Natural Gas Boilers and Natural Gas Emergency Generators	37	11.16	13.24	1.01	0.73	0.08
Propane Fired Boilers	1	0.04	0.28	0.008	0.01	0.0003
Diesel Emergency Generators	20	0.09	0.033	0.02	0.02	0.02
Paint Booths	3	0	0	0.29	0.28	0
Manufacturing/Process Sources	9	0	0	1.26	0.01	0
Fuel Tanks (sets)	4	0	0	0	2.62	0
Fire Pumps (diesel)	4	0.005	0.02	0.0003	0.001	0.0005
Total	**78**	**11.30**	**13.57**	**2.59**	**3.67**	**0.10**

Note: Lead emissions across the station are less than 0.05 tons per year (tpy). CO = Carbon Monoxide; NOx = Nitrogen Oxides; PM = Particulate Matter; SO_2 = Sulfur Dioxides

The natural gas boilers at Hangar 5 emitted 1.8 tpy of criteria air pollutants in 2010 (0.77 tpy CO; 0.91 tpy NOx; 0.07 tpy PM; 0.005 tpy SO_2; and 0.05 tpy VOCs) using nearly 7 percent of the base's annual natural gas consumption (18.245 MMcf out of 246.481 MMcf) and accounting for 7 percent of the base's NOx emissions for heating.

Emissions from use of the CFA paint booth in Hangar 5 were 0.035 tpy of criteria pollutants (98 percent VOCs, 2 percent particulate) in 2010, operating for 78 hours/year and applying 23 gallons/year of paint.

Based on the C-17 basing EA (AMC, 2005), emissions from C-17 aviation operations at Lakehurst from 2011 forward were estimated at 622.5 tpy of NOx, 13.5 tpy of VOC, 148.4 tpy of PM, and 100.12 tpy of CO. The levels of C-17 operations on Lakehurst in 2010 were only 21 percent of the level analyzed by the 2005 EA so the actual 2010 C-17 air emissions are estimated at 130.7 tpy of NOx, 2.8 tpy of VOC, 31.2 tpy of PM, and 21.0 tpy of CO.

3.4.2 Ambient Air Quality

Ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA) requires the USEPA to set NAAQS for pollutants considered harmful to public health and the environment.

NAAQS are provided for six principal pollutants, called criteria pollutants (as listed under Section 108 of the CAA), including the following:

Primary NAAQS set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly.

- CO
- Lead
- NO_x
- Ozone
- PM, divided into two size classes:
    - Aerodynamic size less than or equal to 10 micrometers (PM_{10})
    - Aerodynamic size less than or equal to 2.5 micrometers ($PM_{2.5}$).
- SO_2.

Each state and locality has the primary responsibility for air pollution prevention and control. The CAA requires each state to promulgate a State Implementation Plan (SIP) that provides for implementation, maintenance, and enforcement of the NAAQS in each Air Quality Control Region in the state. In addition, the CAA allows states to adopt air quality standards more stringent than the Federal standards. Regions that comply with the standards are designated as attainment areas. In areas where the applicable NAAQS are not being met, a non-attainment status is designated (USEPA 2007a).

NJ's location along the northeast corridor between the major metropolitan centers of Boston and Washington, D.C., places NJ at the epicenter of pollutants transported from other states. In addition, westerly winds from the Ohio River Valley and nighttime reservoirs of pollutants from southern States along the Appalachian Mountain Range have been shown to contribute to high ozone and fine particulate concentrations in NJ (NJDEP, 2010). Currently, the entire State of NJ does not meet the NAAQS for ozone and is classified as moderate non-attainment for ozone; the 8-hour ozone average concentration is 0.116 ppm.

Atmospheric ozone occurs when NOx, CO and VOCs react in the atmosphere in the presence of sunlight (a photochemical reaction). NOx and VOCs are called ozone precursors. Motor vehicle exhaust, industrial emissions, and chemical solvents are the major anthropogenic sources of these chemicals. Although these precursors often originate in urban areas, winds can carry NOx hundreds of kilometers, causing ozone formation to occur in less populated regions as well. Therefore, VOCs and NOx emissions are regulated as a means of controlling ozone production.

The October 29, 2007 NJ SIP established general conformity budgets for McGuire AFB and Lakehurst for VOCs and NOx. These proposed budgets were established to provide the bases the operational flexibility to meet their missions and future missions of the DoD. These proposed budgets were approved by EPA under 40 CFR 52.1582(m)(5). The 2011 general conformity budget for Lakehurst is 129 tpy of VOC and 793 tpy of NOx. The 2011 budget for McGuire is 703 tpy of VOC and 1,534 tpy of NOx (NJDEP, 2007). There is no specific SIP budget for the former Fort Dix area.

3.4.3 General Conformity Rule

The General Conformity Provision of the CAA (42 USC 7401 *et seq.*; 40 CFR 50-87) Section 176(c), including the USEPA's implementation mechanism, the General Conformity Rule (40 CFR 51, Subpart W), requires Federal agencies to prepare written Conformity Determinations for Federal actions in or affecting NAAQS non-attainment areas or maintenance areas. Since Ocean County is currently in non-attainment status for ozone, the procedural requirements of

the General Conformity Rule are in effect for the Proposed Action and a Conformity Analysis is provided in Appendix B.

3.4.4 Compliance with Federal and State Regulations

Title III of the CAA established a program for controlling emissions of Hazardous Air Pollutants. A major source is any facility that emits 10 tpy or more of any Hazardous Air Pollutant, or 25 tpy of any combination of Hazardous Air Pollutants. These sources of emissions must be identified and are required to obtain an operating permit and comply with Federally mandated control technology (i.e., Maximum Achievable Control Technology) based on emission standards and other conditions. While some Hazardous Air Pollutants may possibly be emitted during CFA operations and retrofit of aircraft, the proposed FAF would not exceed regulatory thresholds and therefore is not subject to the above requirements.

3.5 Noise

The noise levels in the study area are dominated by fixed wing and rotary military aircraft operations. Other noise sources include vehicles and military training activities.

The yearly Day-Night Average Noise Level (DNL) is the primary metric for measuring the cumulative exposure of individuals to noise energy resulting from aviation activities. DNL is expressed in decibels (dB) or dBA (A-weighting) where noise measurements are adapted to the human ear's response to sound. DNL is the measure of the total noise environment. Unlike single event noise metrics, DNL averages the sum of all aircraft noise producing events over a 24-hour period with a 10dBA upward adjustment added to the nighttime events (between 10 pm and 7 am). This adjustment is an effort to account for the increased human sensitivity to night-time noise events.

A decibel is a unit used to express relative difference in power or intensity, usually between two acoustic or electric signals, equal to ten times the common logarithm of the ratio of the two levels.

Federal agencies generally agree that DNL below 65 dBA is compatible with residences, nursing homes, schools, and similar land use types. A DNL above 75 dBA is generally considered unacceptable for these land uses. Between 65 dBA and 75 dBA, noise attenuation measures are recommended in the design and construction of public and quasi-public service buildings.

Examples of common noise sources and their levels in decibels are provided in Table 3-3.

Table 3-3. Common Noise Sources and Levels

Sound Source	Noise Level (dB)	Effect
Jet Engines (near)	140	
Rock Concerts (varies)	110-140	Threshold of pain begins at 125 dB
Chainsaw, Pneumatic Drill, Jackhammer	110	Regular exposure to sound over 100 dB of more than 1 minute risks permanent hearing loss.
Garbage Truck/Cement Mixer	100	No more than 15 minutes of unprotected exposure for sounds between 90-100 dB.
Lawnmower, food blender	85-90	85 dB is the level at which hearing damage (8hrs) begins
Washing Machine, Dishwasher	75-78	Annoying; interferes with conversation; constant exposure may cause hearing damage

Sound Source	Noise Level (dB)	Effect
Vacuum cleaner, hair dryer	70	Intrusive; interferes with telephone conversation
Normal conversation	50-65	
Quiet Office	50-60	Comfortable hearing levels are under 60dB
Refrigerator humming	40	
Whisper	30	Very quiet
Rustling	20	Just audible

Source: NIH, 2010

3.5.1 Current Noise Environment

The primary source of high noise levels in the area of the Proposed Action is aircraft operations, of which, C-17 touch and go's on the Landing Zone parallel to Runway 24 is the most dominant source (AMC, 2005). Prior to the C-17 landing zone, primary aircraft operations at Lakehurst/Maxfield Field consisted of NJ Army National Guard helicopter flights, and the noise footprint was limited to the immediate Lakehurst/Maxfield Field area. When the C-17 landing zone became operational in 2009, aircraft operations at Lakehurst/Maxfield Field doubled and expanded the acreage under the DNL 65 dBA zone by 7,243 percent (land both within JB MDL and off-base). The C-17 conducts an average of 24 sorties per day[9] and is typically the largest aircraft operating at the Lakehurst/Maxfield Field runways. The air operations of the CFA are reflected in the noise contours modeled for the C-17 landing zone shown in Figure 3-2.
.
The project study area would fall within the DNL 65 to 70 dBA levels as outlined in the C-17 basing EA (AMC, 2005). In zones that experience noise levels between 65 and 75 dBA, sound attenuation measures are required for occupied buildings. However, occupants of existing occupied buildings within this noise contour that do not have sound attenuation have not complained of noise levels interfering with their work or causing any annoyance (Rudowski, 2011).

Other noise sources near the proposed FAF include occasional forklift operation at the Hazardous Waste/Recycling Facility to the west, and the breaking of concrete during State Police Urban Search and Rescue training (USAR) to the east of the site.

According to the 2001 Environmental Assessment for the NJ Urban Search and Rescue Training Facilities at NAES Lakehurst NJ (NAES, 2001), noise levels at the site without training were typically at 54 dBA in a ten minute equalized average sample. Noise levels during training were typically 79 dBA for breaching and breaking and up to 91 dBA for saw cutting of concrete when measured at a distance of 15 meters (50 feet). The USAR breaching and breaking activities occur infrequently with high noise levels occurring intermittently throughout the training day. The proposed FAF administrative offices on Parcel 22 would be located approximately 800 feet from the USAR training area.

[9] The C-17 basing EA (AMC, 2005) estimated that the C-17 would conduct up to 115 sorties per day at the Landing Zone. In 2010, there were 24 sorties per day at the Landing Zone but operations could increase in the future up to the value described in the EA.

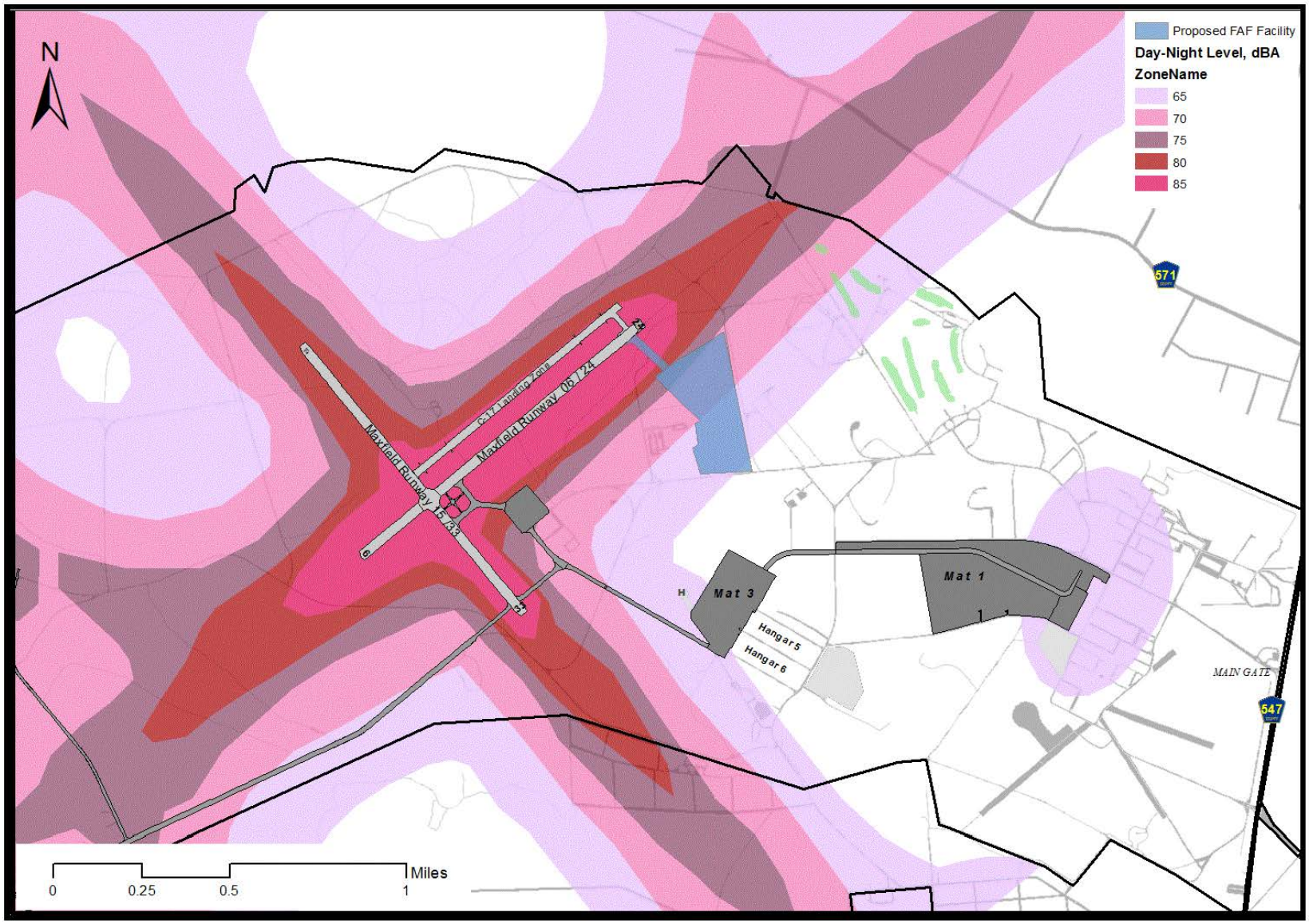

Figure 3-2. Noise Contours, Lakehurst/Maxfield Field Runways

3.5.2 Noise Sensitive Receptors

With regard to the noise environment, sensitive receptors include, but are not limited to, health care facilities, retirement homes, residences, and schools. The closest sensitive receptors would be the residents at the Military Officer's Housing Area, located 0.5 miles from the fenceline of the proposed FAF. The nearest off-base residential receptor would be 0.8 miles from the proposed FAF.

3.6 Geology, Topography, and Soils

3.6.1 Geology

Lakehurst is located in the Outer Coastal Plain. The Outer Coastal Plain is New Jersey's largest physiographic area consisting of about 2.25 million acres including all of Cape May, Cumberland, Atlantic, and Ocean Counties and parts of Salem, Gloucester, Camden, Burlington, and Monmouth Counties.

The geology is characterized as tertiary sedimentary rock. The NJ Geologic Survey indicates that the project study area lies entirely within the Kirkwood-Cohansey Aquifer system. This formation consists of light-colored sandy quartz gravel, is considered a fluvial deposit of Miocene times, and overlies the Cohansey Sand formation (NJGS, 2003).

Sections 307 and 309 of the Indoor Radon Abatement Act of 1988 directed EPA to list and identify areas of the U.S. with the potential for elevated indoor radon levels. All of Ocean County is listed as Zone 3 – Low Potential (USEPA, 2010).

Earthquake potential in Ocean County is relatively low (see Figure 3-3). The largest potentially active fault in NJ is the Ramapo Fault located in northern NJ where numerous minor earthquakes have been recorded within approximately 20 miles of the fault.

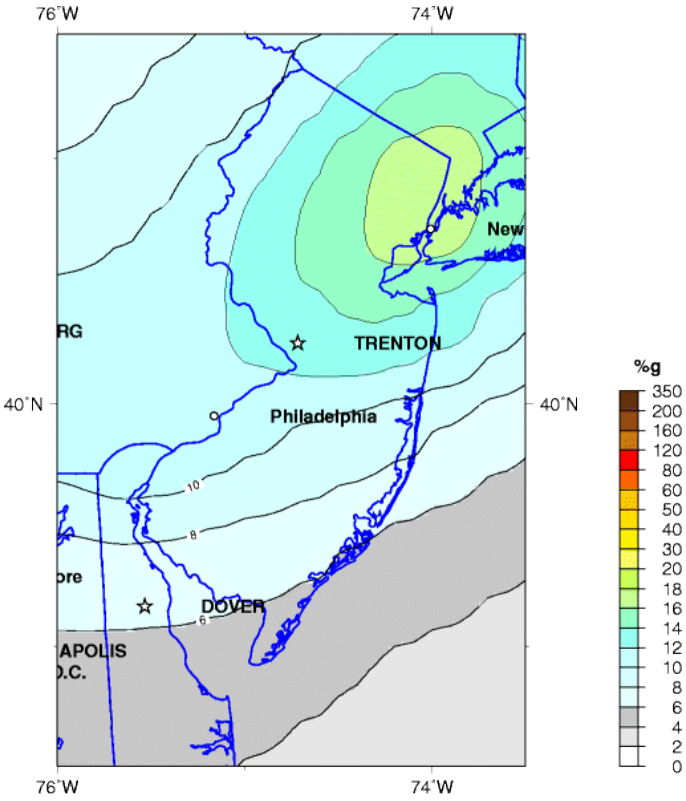

Figure 3-3. NJ Seismic Hazard Map

Source: USGS, 2008

3.6.2 Topography

Elevations range from 90 feet above mean sea level, in the northern section of the project study area, to 70 feet above mean sea level in the southern portion of the project study area (USDA 1980).

3.6.3 Soil Types and Characteristics

The majority of soils present within the project study areas are members of the Lakehurst-Lakewood-Evesboro association. The Lakehurst-Lakewood-Evesboro association is characterized by nearly level to sloping, somewhat poorly to excessively drained, sandy soils in upland areas, dominated by pine or oak woodland. Primary limitations for land use are droughtiness[10], rapid permeability, very low fertility, and the hazard of wildfires (USDA, 1980).

The following three soil types are located within the project study area:

- Downer loamy sand, 0-5 percent slope within the existing Runway 24 clear zone: is characterized as nearly level to gently sloping, well-drained soil. Downer loamy sand has a low to moderate available water capacity, and the permeability of this soil is moderate or moderately rapid. Downer loamy sand has a slight water erosion hazard and a severe wind erosion hazard. Runoff is slow. This soil is generally suitable for most urban uses and is in capability subclass lls.[11]
- Lakehurst sand, 0-5 percent slope (small portion of the site near the runway) is characterized as nearly level, moderately well drained or somewhat poorly drained soil located in depressed areas and on low terraces. Lakehurst sand has a low available water capacity, and the permeability of this soil is rapid in the subsoil and substratum. This sand has a moderate wind erosion hazard and runoff is slow. This soil is in capability subclass lVw.
- Lakewood sand, 0-5 percent slope (most of the site) is characterized as nearly level to gently sloping, excessively drained soil. Lakewood sand has a low available water capacity, and the permeability of this soil is moderate to rapid. The hazard of wind erosion is severe and runoff is slow. This soil is generally suitable for most urban uses, but the loose, sandy surface is a limitation for recreational uses and the rapid permeability limits use for sanitary landfills. This soil is in capability subclass Vlls.

According to the US Department of Agriculture, Natural Resources Conservation Service, none of the soils within the project study areas have been identified as being hydric or having hydric components (e.g. soils are not associated with wetland areas) (USDA, 1980).

None of the soil types within the project study areas are designated as prime farmland and/or farmland of state-wide importance.

3.7 Water Resources

3.7.1 Regulatory Framework

Within the U.S., "waters of the U.S." are regulated under Sections 401 (33 USC 1341) and 404 (33 USC 1344) of the Federal Clean Water Act. No features (i.e., navigable waterways) subject to regulation under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) are present at the Site. The primary Federal regulations and guidance that govern water resources

[10] A droughty soil is one that is unable to store enough water to meet plant requirements. Sandy and gravelly soils are droughty because they have low water-holding capacities.

[11] The Land Use Capability Class indicates the suitability of the soil for cultivation. Soils within the project study areas are categorized as Class lls (soils with moderate limitations that require special conservation practices due to its doughty soils), *Class VIw (*soils with severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forestland, or wildlife food and cover) and Class Vlls (soils have severe limitations that restrict their use for cultivation due to its doughty soils), (USDA 1980).

development, usage, and discharges at Federal sites, or sites affected by Federal activities, include the following:

- Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977 (CWA) (33 USC 1251 et seq.)
- Land and Water Conservation Act of 1976 (16 USC 460)
- National Pollutant Discharge Elimination System Wastewater Permits (33 USC 1342)
- Pollution Prevention Act of 1990 (42 USC 13101-13109)
- Safe Drinking Water Act of 1974 (42 USC 300f et seq.)
- Soil and Water Resources Conservation Act of 1977 (16 USC 2001)
- Superfund Amendments and Reauthorization Act of 1986 (P.L. 99-499; 40 CFR 300)
- Emergency Planning and Community Right-to-Know Act of 1986 (42 USC 11011)
- Water quality programs in general (33 USC 1160 et seq. and 1251 et seq., 42 USC 300f et seq. and 6901 et seq.)
- Water Resources Development Act of 1990 (33 USC 2309a, 2316, and 2320)
- Wild and Scenic Rivers Act of 1968 (16 USC 1271 et seq.)
- Energy Independence and Security Act of 2007, Section 438 Stormwater Management
- Air Force Instruction (AFI) 32-7041, Water Quality Compliance
- AFI 32-7045, Environmental Compliance Assessment and Management Program
- AFI 32-7064, Integrated Natural Resources Management
- EO 11988, Floodplain Management, 24 May 1977
- EO 11990, Protection of Wetlands, 24 May 1977
- EO 11991, Protection and Enhancement of Environmental Quality, 24 May 1977
- EO 12856, Federal Facilities Compliance with the Toxic Release Inventory requirements of Title III, Section 313 of Superfund Amendments and Reauthorization Act, 3 August 1993.

Water resources at JB MDL are also regulated under the jurisdiction of NJDEP. NJDEP has the primary responsibility for protecting NJ's surface and ground waters from pollution caused by improperly treated wastewater and its residuals, as well as destruction of watersheds from development. The relevant NJ regulations and guidance for water resources within JB MDL include the following:

- NJ Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.)
- Water Quality Planning Act (N.J.S.A. 58:11A-1 et seq.)
- Spill Compensation and Control Act (N.J.S.A. 58:10-23.11 et seq.)
- Safe Drinking Water Act (N.J.S.A. 58:4A-4.1 et seq.)
- NJ Ground Water Quality Standards (N.J.S.A. 58:12A-1 et seq.)
- Water Pollution Control Act (N.J.A.C. 7:14)
- Flood Hazard Area Control Act (N.J.S.A. 58:16A-50 et seq.)
- Pinelands Comprehensive Management Plan (N.J.S.A. 13:18A-1 et seq., N.J.A.C. 7:50 et seq.)

Water resources at JB MDL, as applicable, are managed according to these and other applicable environmental laws and regulations.

3.7.2 Surface Water Resources

The project study area lies within the Toms River Drainage Basin. Drainage from the JB MDL Lakehurst area discharges to the Ridgeway and Harris Branches to the north, and to the Black, Manapaqua, and North Ruckles Branches to the south. All five streams discharge into Toms River. Surface water drainage for the installation is generally to the southeast (NAES, 2002). Several headwater tributaries to these originate on the base.

The closest confirmed stream is a tributary to the Manapaqua Brook located 1,900 feet to the east of the proposed FAF site (see Figure 3-4). Older US Geologic Survey (USGS) maps of the area show a similar tributary to the Manapaqua Brook originating within the proposed FAF site and merging with the western branch just north of Hangar 5. A site reconnaissance of the project study area on August 1, 2007 identified what appeared as a small, man-made, drainage ditch where the USGS map listed stream and where pre-1956 aerial photographs indicate it would be located. A site walk-over on April 25, 2011 did not indicate any wetlands or wetland indicator plants. Wetlands delineation data for this portion of the base indicates that wetlands do not occur within the project study area (see Figure 3-4).

Based on available data obtained from the Federal Emergency Management Agency, the project study area is not located within a 100- or 500-year floodplain.

3.7.3 Groundwater Resources

Underlying Lakehurst is the Cohansey Sand Aquifer formation. The Cohansey Sand Aquifer is relatively shallow in depth and is highly permeable, making potential contamination a high concern. The groundwater below the majority of Parcel 22 is located within a Tier 3 Well Head Protection Area for a Community Water System (Hill System) (see Figure 3-5). A wellhead protection area is an area which a well draws its water from within a specified timeframe. Once delineated, these areas become a priority for efforts to prevent and clean up groundwater contamination. A well head protection area consists of three tiers, based on the timeframe of travel to the well. The outer boundaries of these tiers are: Tier 1 – two years; Tier 2 – five years; and Tier 3 – twelve years (NJDEP, 2003).

Classification Exception Area (CEA) is a designation that must be established as part of an approved remedy whenever standards applicable to ground water in a specific area are not or will not be met for the term of the remediation. The intent of a CEA is to ensure that the uses of a designated aquifer in a specific area are restricted until standards are achieved.

A Classification Exception Area (CEA) was designated adjacent to the project study area for groundwater associated with Area D on January 11, 2001 for a period of 15 years with a restriction depth of 30 feet. The source of groundwater contamination in Area D is the former 34-acre landfill is located along the eastern boundary of Parcel 22, adjacent to the east of the former rifle range (known as Site 31). The landfill was operational between the years 1960 and 1980. It was capped and approved for closure by the NJDEP. Oils, solvents, hydraulic fluid, freon, transformer filters containing Polychlorinated Biphenyls, and mercury were reportedly among the items disposed of in the landfill.

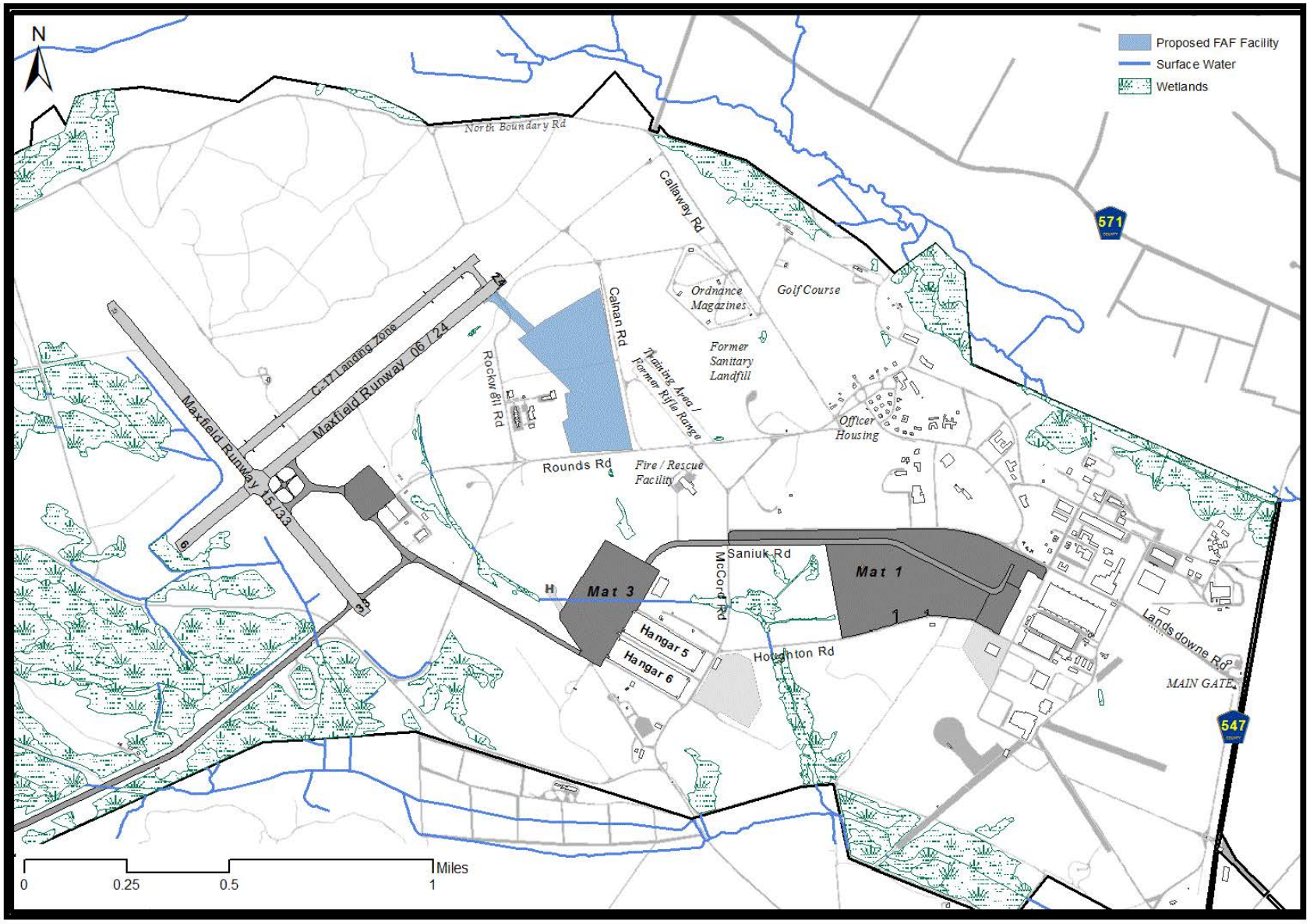

Figure 3-4. Surface Water Resource

A Record of Decision under the Naval Air Engineering Station's Installation Restoration Program was signed on 27 September 1993, determining that no further action be taken except for long-term groundwater monitoring.

There are 19 monitoring wells that are sampled bi-annually for VOCs at Area D. In the most recent sampling report dated January 2010, results for individual contaminants were under 2 parts per billion (ppb) except for well DU (samples DU-A and DU-C) that showed levels between 18 and 21 ppb for 1,3-dichlorobenze, and chlorobenzene. This well is located on the eastern edge of the former landfill along Callaway Road. All levels were below NJDEP Practical Quantitation Levels and EPA Maximum Contaminant Levels except for vinyl chloride was detected in both these wells at approximately 1.3 ppb (above the NJDEP action limit of 1.0 ppb) (CAPE, 2010).

During at site investigation of former small arms sites on Lakehurst, ten groundwater samples from temporary wells were analyzed in October 2010 from the former skeet range on the south portion of Parcel 22 for metals including lead, antimony, copper, zinc, and petroleum aromatic hydrocarbons (filtered and unfiltered). These wells were located just to the west of the proposed FAF site. Groundwater was encountered at depths of 23 to 25 below ground surface. The unfiltered groundwater samples exceeded project action limits for one or more metals. None of the filtered samples exceeded action limits, indicating that metals are attributable to soils and not metals in solution (Tetra Tech, 2011).

The current 90-day hazardous waste storage facility (Building 343) was formerly a storage site for the Advanced Underwater Warfare program. Between 1960 and 1976, special weapons were stored in the building, which was essentially a 25-bay multi-cubicle magazine. At the conclusion of their operations, a radiological survey was conducted with no radiation detected. Building 343 was then released for unrestricted use. According to a review of installation spill records dating back to April 1981, there were two spills at or near the 90-day facility on paved areas; the first was an 8-ounce PCB spill in September 1983 and the other was a 55-gallon drum of waste gasoline that fell off a truck in February 1984. Both spills were immediately cleaned up with no further action required.

3.7.4 Stormwater Management

The JB MDL Lakehurst currently operates under a R11 Public Complex Stormwater General Permit from the NJDEP and maintains a Storm Water Pollution Prevention Plan for control of point and non-point source pollution of surrounding surface and groundwater. Current systems include pollution prevention measures, retention ponds, and a network of collection systems.

All construction projects at the base shall have site-specific soil erosion and stormwater management plans considering runoff control during and after construction. Proposed projects that disturb more than 1 acre of soil must obtain authorization under NJPDES Permit No. NJ008323, or under an individual permit. The procedures and practices included in these plans shall be in accordance with the Standards for Soil Erosion and Sediment Control under Chapter 251, P.L. 1975, the Soil Erosion and Sediment Control Act and the Federal Water Pollution Control Act, 33 U.S.C. 1323. Contractors submit such plans as part of their environmental plan submittal.

Design criteria and calculations shall include but not be limited by, the objectives and principles in the Ocean County Technical Design Manual, and the "A Guide to Stormwater Management

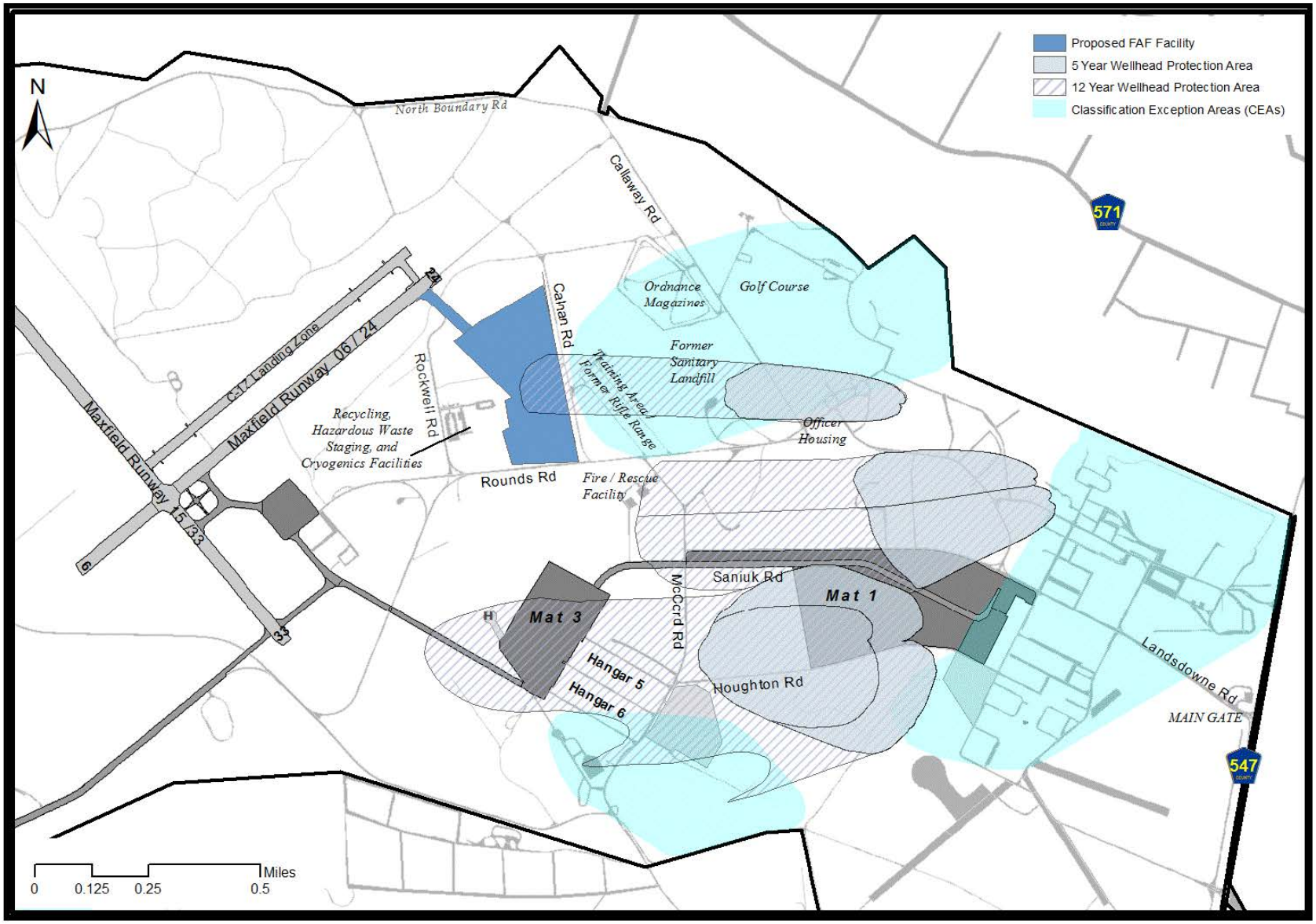

Figure 3-5. Groundwater CEAs and Well-Head Protection Areas

Practices in New Jersey Manual". The JB MDL and its projects must comply with the stormwater requirements of the Energy Independence and Security Act of 2007 (Section 438, Stormwater Runoff). All newly constructed drainage systems shall have a maintenance and inspection schedule as part of their design. Inspections of all major drainage facilities are conducted annually and after major storms (NAES, 2009a).

3.8 Biological Resources

3.8.1 Regulatory Framework

Protection and management of biological resources at JB MDL is mandated by a number of laws, regulations, and guidance documents. The primary statutes, regulations, EOs, and guidance that direct, and apply to, the management of biological resources at the installation include the following:

- Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq.) [12]
- Endangered Species Preservation Act of 1966 (16 USC 1531)
- Engle Act of 1958 (10 USC 2671)
- Federal Insecticide, Fungicide, and Rodenticide Act of 1947 (7 USC 136)
- Federal Noxious Weed Act of 1975 (7 USC 2801)
- Fresh Water Pollution Control Act, as amended by the Clean Water Act (33 USC 1251 et seq.)
- Fish and Wildlife Conservation Act of 1980 (16 USC 2901 et seq.)
- Fish and Wildlife Coordination Act of 1934 (16 USC 661 et seq.)
- Migratory Bird Conservation Act of 1966 (16 USC 715)
- Migratory Bird Treaty Act of 1918 (16 USC 703-711)
- Sikes Act of 1960 (16 USC 670 et seq.), as amended
- AFI 32-7064, Integrated Natural Resources Management
- EO 11987, Exotic Organisms, 24 May 1977
- EO 11988, Floodplain Management, 24 May 1977
- EO 11990, Protection of Wetlands, 24 May 1977
- EO 11991, Protection and Enhancement of Environmental Quality, 24 May 1977
- Pinelands Comprehensive Management Plan (N.J.S.A. 13:18A-1 et seq., N.J.A.C. 7:50 et seq.).

3.8.2 Integrated Natural Resource Management Plan

Natural resources within the Lakehurst portion of JB MDL are managed in accordance with the Integrated Natural Resource Management Plan (INRMP), prepared for the former Naval Air Engineering Station in August 2002 (NAES, 2002). A Joint Base INRMP is under development. However, until the new plan is completed and promulgated, the INRMP in effect for the project study area is the Lakehurst INRMP. The INRMP provides detailed descriptions of the natural

[12] The protection of Federally listed species is regulated under the ESA. Section 7 of the ESA dictates that Federal actions should not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of critical habitat of such species. In addition, NEPA review and consideration of state-listed species is required per Section 5-3(q) of 32 CFR PART 651. Furthermore, Section 7(a) of the ESA requires formal consultation with the USFWS whenever a Federal proponent anticipates taking any action that may affect a listed species or critical habitat.

resources present at Lakehurst, identifies management issues, and establishes specific natural resources management activities. The INRMP was developed in cooperation with the United States Fish and Wildlife Service (USFWS) and the NJ Division of Fish and Wildlife.

3.8.3 Vegetation

Vegetation communities at Lakehurst are diverse, ranging from open grasslands to mature forest communities. Lakehurst consists of approximately 45 percent upland forest, 28 percent brushland and shrubland, 1.3 percent surface waters, 12 percent wetlands, and 13 percent developed/disturbed areas (NJARNG, 2006b).

The project study area is dominated by a Pine/Oak - Oak/Pine forest. The Lakehurst INRMP shows this area as Mixed Forest (>50% coniferous with >50% crown closure). According to the Lakehurst INRMP, there were 759 acres of this particular type of forest, and 3,326 acres of forest across the 7,430 acre Lakehurst area (44 percent of the base) in 2002. Plant species found within the region are common for climatic and hydrologic conditions of the Pine Barrens Natural Community. Tree species native to this region may include: pitch pine; red cedar; scarlet oak; black-jack oak; sassafras; black cherry; American holly; red maple; and scrub (NJ or Virginia) pine.

3.8.4 Mammals

There have been no mammal surveys conducted on Lakehurst other than rare species surveys. However, the vegetative communities are representative of NJ Pine Barrens, and common large to medium species that are likely to occur include: white-tailed deer; gray fox; opossum; and raccoon. Species that occur less frequently include: red fox, bobcats, and eastern coyote. Groundhogs are reportedly rare in the Pine Barrens but they occur along grass taxiway clearzones and lawn areas at the base. Common medium to small mammals that occupy upland forests include: eastern gray squirrel, red squirrel, and southern flying squirrel. Small mammals that occur in dry upland areas include white-footed mice and pine voles (NAES, 2002).

3.8.5 Forest Birds

According to the Lakehurst INRMP, the extensive areas of pine and mixed pine and oak forests provide habitat for a number of bird species. The eastern towhee is the most common forest bird on the Lakehurst area. It occurs in every forest type as well as several other habitats on the area. The forests provide habitat for a number of insect-eating birds such as Red-Eyed Vireos, Scarlet Tanagers, and Great Crested Flycatchers. Common warblers include Pine Warblers, Prairie Warblers, Black-and-White Warblers, and Ovenbirds. Whip-poor-wills nest on the ground in dry open pine-oak and oak-pine woodlands, sometimes near fields.

Forests dominated by mature oaks can support several specialist species that depend on oaks for nesting and for a food source. Included are broad-winged hawks, which nest in tall oaks, and several woodpeckers such as Northern Flicker, and hairy and Downy Woodpeckers, which also prefer deciduous trees for cavity excavation. Birds that use abandoned woodpecker cavities, such as Carolina Chickadee, White-breasted Nuthatch, and Tufted Titmouse are also often found in oak-dominated forested. Acorns are a primary food of Blue Jays which can be found in these and other community types.

Eastern Bluebirds, Eastern Kingbirds and Barn Swallows are birds that often perch on woodland edges over-looking the runway's extensive grasslands. The Red-Tailed Hawk, Northern Harrier, and American Kestrel are predatory birds that hunt in open fields.

Between August 2006 and July 2007, a forest bird survey was conducted by the NJ Audubon Society on Lakehurst, with a survey point located within parcel 22 (point F03). Forest bird counts were conducted once per month at each point between sunrise and 10 am unless weather or other climatic conditions interfered with the sampling protocol. Prior to each count, the observer recorded starting time, wind intensity in Beaufort Scale, and temperature. No surveys were conducted when winds were above Beaufort Scale 4 or when moderate rain or noise levels significantly affected the observer's ability to detect vocalizations. Each count lasted 10 minutes, during which the observer recorded all individuals, by species, detected by sight or sound.

Nineteen bird species were recorded at the site at least once over the twelve month survey. The species that were identified in three to seven of the twelve surveys included: Carolina Chickadee; Eastern Towhee; White Breasted Nuthatch; Blue Jay; Pine Warbler; Downy Woodpecker; Tufted Titmouse; and Eastern Wood Peewee. Species that were detected during one or two monthly surveys included: Yellow Rumped Warbler; American Robin; Golden-crowed Kinglet; Northern Flicker; Hairy Woodpecker; Brown Headed Cowbird; Ovenbird; Chipping Sparrow; Yellow-billed Cuckoo; Blue-gray Nutcatcher; and Black and White Warbler.

3.8.6 Special Status Species

According to the USFWS, no Federally-listed or proposed threatened or endangered flora or fauna species are documented in the vicinity of Parcel 22 that would be affected by the Proposed Action (see Appendix A for the USFWS letter). Therefore, no further consultation pursuant to Section 7 of the ESA is required. However, the USFWS requests that all tree cutting be conducted outside the migratory bird breeding season of March 15 to July 31 as the Breeding Bird Atlas lists 71 species of breeding migratory birds occurring in the vicinity of the proposed project site.

According to documented sightings, there were no State or Federally-listed species found within the boundary of Parcel 22 (going back to the first rare species survey in 1989) (see Figure 3-6). However, there are several species of concern that have been sighted at least once over the last 20 years within a quarter-mile outside of the parcel boundary including:

- Grasshopper sparrow (State Threatened, grassland habitat)
- Prairie Warbler (Bird of Conservation Concern - mixed pine-oak barrens, grasslands)
- Marsh Wren (this wren inhabits marsh areas but was sighted flying overhead at an upland field that is not breeding habitat)
- Attalus Skipper (NJ Species of Special Concern - grasslands)
- Northern Pine Snake (State Threatened, forest and grassland habitat)

The Lakehurst portion of JB MDL contains large expanses of grasslands (approximately 1,700 acres) within its airfield clear zones and the jump circle. These grasslands provide good habitat for grassland birds. The base has a mature grassland bird survey and protection program. The base manages its grasslands to promote habitation by State-listed threatened and endangered

birds such as the upland sandpiper and grasshopper sparrow. Land disturbance and mowing of grasslands is avoided during breeding season (April 1 – July 15) (NAES, 2002).

While the Northern Pine Snake population outside of the JB MDL is facing increasing threats from land development and poaching, there is a thriving population of these snakes within the Lakehurst portion of the base and they are found in relative abundance in nearly every area of Lakehurst. During a three-year study period in the late 1990's, 350 Northern Pine Snakes were captured and released (NAES, 2002). Six of the greatest threats to Northern Pine Snakes in the State are: 1) habitat loss and fragmentation; 2) poaching and illegal collection; 3) predation from both natural and subsidized predators; 4) mortality along roads; 5) fire suppression and habitat change; and 6) off-road vehicle use (Golden, et.al., 2009). It is likely that, as a secure facility, the base offers substantial protection to this species from at least three of these six threats (poaching, mortality along roads, and off-road vehicle use).

The nesting season for Northern Pine Snakes is from June 20 through about July 10. They hibernate from mid-fall to mid-spring in natural cavities or dens excavated below the frost line. The Navy began a Northern Pine Snake protection program and data collection effort over 15 years ago, and known nesting sites and hibernacula are protected from disturbance by 350-foot and 150-foot buffers respectively on the base (NAES, 2002). Artificial hibernacula are created to encourage their survival and wire fencing is placed over den entrances to discourage predators from digging up eggs. While there were no documented dens or nest sites within Parcel 22, the sightings of Northern Pine Snakes adjacent to the site boundary and within a quarter-mile of the parcel makes it likely that Parcel 22 provides, at a minimum, foraging habitat for this species.

According to the NJDEP Natural Heritage Database and Landscape Project, the project study area shows occurrences of 5 State-listed special status species (see Table 3-4) and one globally ranked species. The database also showed an additional 16 State-listed or globally ranked species occurring within a quarter-mile of the project site, but not within the proposed FAF boundary. The Natural Heritage Database did not identify any Federally-listed species near the site. The database did not have any records of rare plants or ecological communities on or within a quarter-mile of the site (NJDEP, 2011).

Table 3-4. Summary of NJDEP Identified Special Status Species with Potential to Occur at Parcel 22 or within a Quarter-Mile

Species	Common Name	State or Global Status	Typical Habitat
Occurrences mapped on the site			
Hesperia attalus slossonae	Dotted Skipper	G3G4	Sunny open longleaf pine stands and broomsedge fields. Frequently burned areas where the grass is not mowed is a favorable habitat.
Ammodramus savannarum	Grasshopper Sparrow	T/SC	Large open grasslands and prefer areas with short to medium height grasses interspersed with patches of bare ground.
Ardea herodias	Great Blue Heron	SC/S	Sheltered, shallow bays and inlets, sloughs, marshes, wet meadows, shores of lakes, and rivers. Nesting colonies are typically found in mature forests, on islands, or near mudflats.
Pituophis m. melanoleucus	Northern Pine Snake	T	Dry pitch pine/oak forested areas.

Species	Common Name	State or Global Status	Typical Habitat
Bartramia longicauda	Upland Sandpiper	E	Large open grasslands and are subject to grass height (60 cm and less are preferred).
Occurrences mapped within a quarter-mile of the site			
Strix varia	Barred Owl	T	Dense, mature forests with relatively open understories.
Coccyzus erythopthalmus	Black-Billed Cuckoo	SC/S	Edges and clearings of young deciduous and mixed deciduous-coniferous woods with low, dense shrubs, near abandoned farmland, brushy hillsides and pastures, roadsides, fencerows, orchards, berry patches, and hawthorn thickets.
Dendroica fusca	Blackburnian Warbler	G5	Mixed forests of hemlock, spruce, and various hardwoods.
Dendroica virens	Black-throated Green Warbler	S	Larger tracts of coniferous stands and tends to avoid disturbed or small patches of forested areas.
Toxostoma rufum	Brown Thrasher	SC/S	Brushy edges of woodlands, dry thickets, overgrown fields, early successional woodlands, forest openings such as powerline cuts, shrubby undergrowth in open woods, residential shrubs and hedges.
Dendroica cerulean	Cerulean Warbler	S	Large tracts of deciduous hardwood forests that have tall, large-diameter trees and diverse vertical structure in the forest canopy.
Chordeile s minor	Common Nighthawk	SC	A variety of open habitats, from shrub-steppe, grassland, and agricultural fields to cities, clear-cuts, and burns, as long as there are abundant flying insects and open gravel surfaces for nesting.
Accipiter cooperii	Cooper's Hawk	T/S	Small forested tracts of land or on the edges of extensive forests.
Buteo lineatus	Red-shouldered Hawk	E/T	Mature deciduous or deciduous-conifer forests and forested wetlands.
Empidonax minimus	Least Flycatcher	S	Lower elevations in deciduous or mixed woods, often along rivers.
Caprimulgus vociferous	Whip-poor-will	G5	Open deciduous or mixed woodlands, especially young second-growth forests. Prefers fairly dry woods near fields or other open areas.
Hylocichlia mustelina	Wood Thrush	SC/S	Breeds in the interior as well as the edges of deciduous and mixed forests, often near water.
Helmitheros vermivorus	Worm-eating Warbler	S/S	Well-drained upland deciduous forests with understory patches of mountain laurel or other shrubs, drier portions of stream swamps with an understory of mountain laurel, deciduous woods near streams; almost always associated with hillsides.
Terrapene carolina carolina	Eastern Box Turtle	SC	Deciduous or mixed forest regions with moderately moist floor and good drainage.

Species	Common Name	State or Global Status	Typical Habitat
Lampropeltis g. getula	Eastern Kingsnake	U	Areas along streams, marshes and swamps, as well as open fields, forests and abandoned dwellings.
Hyla Anderson ii	Pine Barrens Treefrog	T	Acidic habitats, such as Atlantic white cedar swamps and pitch pine lowlands that are carpeted with dense mats of sphagnum moss.

G3-Either very rare and local throughout its range or found locally in a restricted range or because of other factors making it vulnerable to extinction throughout its range;); G4 – Apparently secure globally, although it may be quite rare in parts of its range, especially at the periphery; G5 – Demonstrably secure globally, although it may be quite rare in parts of its range, especially at the periphery; T – State Threatened species (a species that may become endangered if conditions surrounding the species begin to or continue to deteriorate); SC- State special concern (applies to animal species that warrant special attention because of some evidence of decline, inherent vulnerability to environmental deterioration, or habitat modification that would result in their becoming a threatened species); S – State stable species (a species whose population is not undergoing any long-term increase/decrease within its natural cycle. E- Endangered species; U – Undetermined species (a species about which there is not enough information available to determine the status);
Source: NJDEP, 2011 (Appendix A)

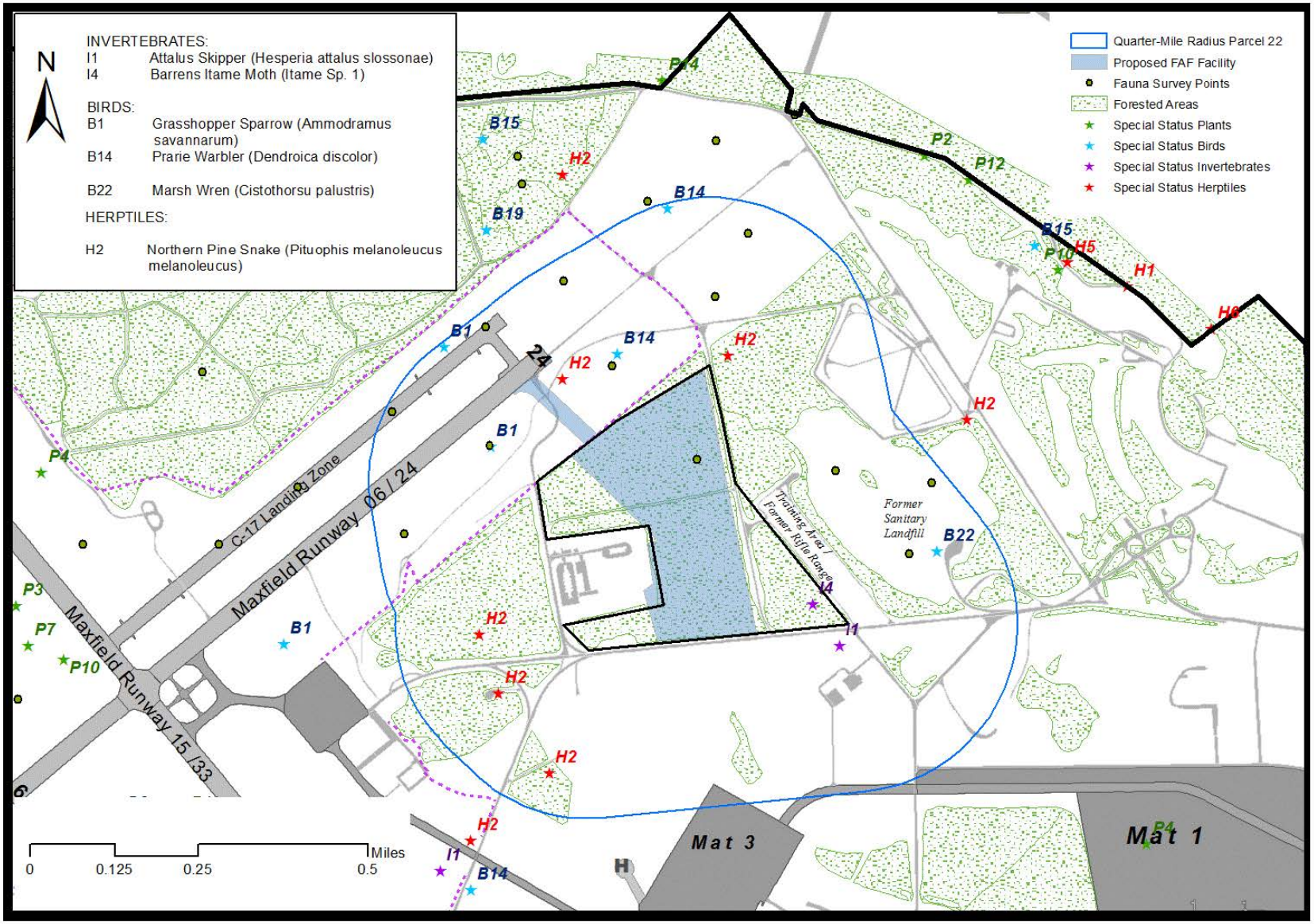

Figure 3-6. Special Status Species Sightings Near the Proposed FAF

3.9 Cultural Resources

3.9.1 Integrated Cultural Resources Management Plan

The JB MDL operates its cultural resources management program in accordance with AFI 32-7065 – Cultural Resources Management. An ICRMP covering the entire Joint Base is under development and should be promulgated in late 2012. Until then, the plan in effect for actions within the Lakehurst portion of JB MDL is the 2006 Naval Air Engineering Station ICRMP (NAES, 2006).

The ICRMP provides an internal compliance and management tool that integrates the entirety of the cultural resources program with ongoing mission activities. The ICRMP establishes priorities for the identification and standards for the evaluation of cultural resources, and provides a schedule to accomplish program objectives during a five-year program (NAES, 2006).

3.9.2 Prehistoric Archeological Sites

No prehistoric archeological sites have been identified on NAES Lakehurst. Two cultural resource surveys have been conducted for Lakehurst, including a reconnaissance survey conducted in 1994 (BEC, 1994) that identified areas of prehistoric site sensitivity, and one subsurface survey conducted in 2008 that tested areas having high archeological sensitivity along an installation road (NAES, 2008). Neither survey encountered evidence of prehistoric occupation.

Prehistoric sites are rare in the Outer Coastal Plain of New Jersey. Nevertheless, potential remains for the presence of prehistoric sites. In the mid-1990s, as part of the Cultural Resources Survey for Naval Air Engineering Station Lakehurst, New Jersey (BEC, 1994), NAES Lakehurst prepared and refined a sensitivity model for prehistoric sites based on the cultural record of the Pinelands and environmental factors, including soils, elevation, slope, and distance from water or wetlands. The model divides NAES Lakehurst into four sensitivity types: disturbed areas and areas of low, moderate and high potential to contain archeological sites (Figure 3-7).

The archeological sensitivity map produced as a result of the 1994 survey indicated an area of high sensitivity for prehistoric archeological sites along a tributary of Ridgeway Branch located on a map within the project study area. However, historic maps and aerial photographs do not show a tributary stream in this location, and a site walkover conducted on June 28, 2011 by the JB MDL Cultural Resource Manager and staff confirmed that there is no evidence of a tributary stream. A revised archeological sensitivity map was produced for the 2006 NAES ICRMP that correctly shows low potential for prehistoric archeological sites within the project study area (NAES, 2006).

3.9.3 Historic Archeological Sites

The documented patterns of historic land use in Ocean County indicate that the predominant historic activities were related to forest and water products, including extraction of bog iron, timber, charcoal, cranberries and water power. The environmental setting at Lakehurst suggests that these activities may have occurred within the base property, even though historic records of them are lacking. .

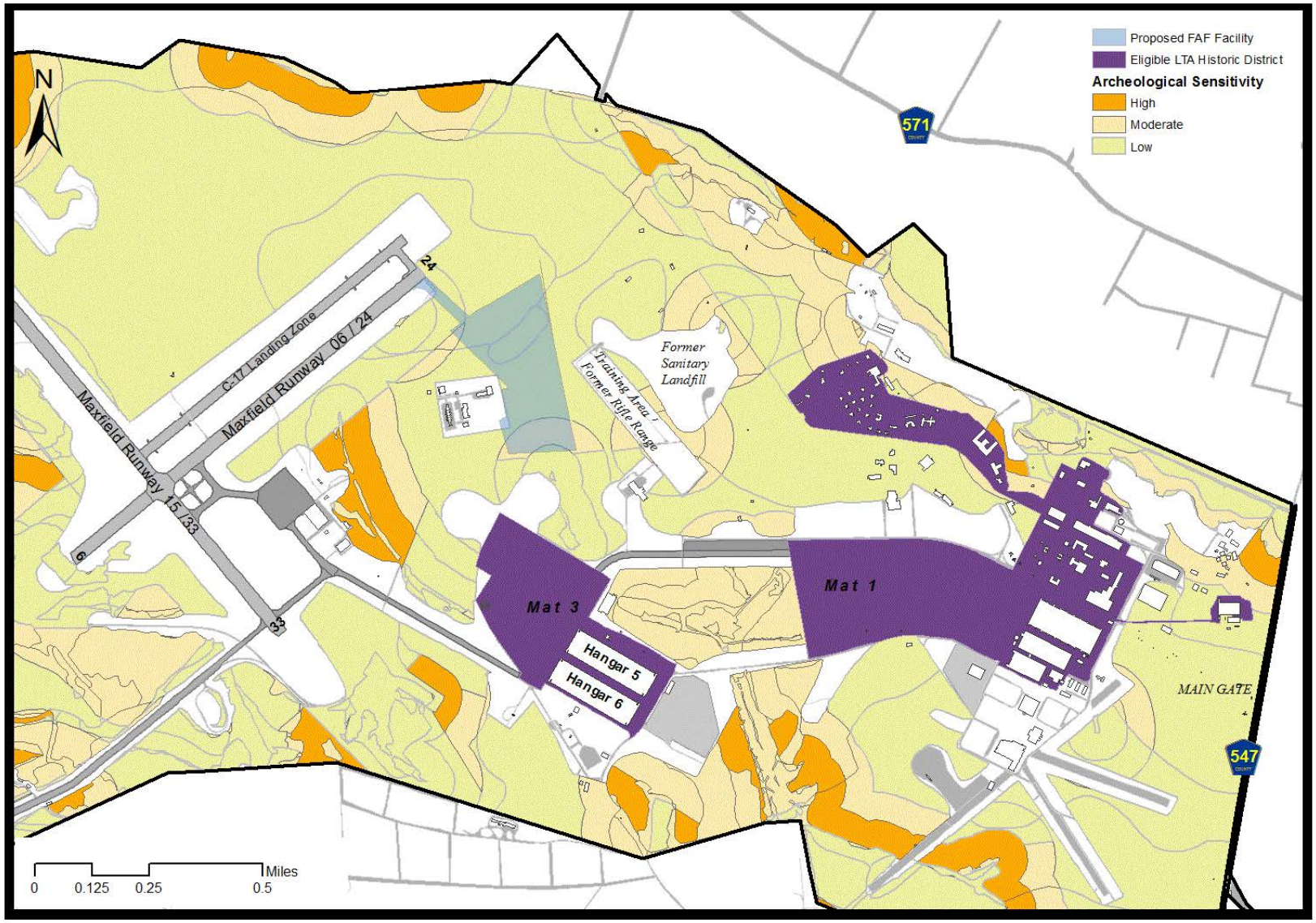

Figure 3-7. Cultural Resources

There are four known or potential historical archeological sites within Lakehurst based on historic documents (BEC, 1994). These are:

- ***Eighteenth-century Mill and Gun Road***: The remains of a mill dam were once evident in the area northeast of Building 33, Bachelor Officers' Quarters along the boundary of NAES Lakehurst. Mill remains were uncovered in the early twentieth century, when a cranberry bog was being cleared. An old Revolutionary War-era road, known as the *Gun Road*, was rumored to have crossed the sawmill location. Historic maps show the road running south across the eastern site of NAES Lakehurst. A visual inspection of the sawmill road area was made as part of the cultural resources survey in 1994 and recorded no artifacts or features. The area is not impacted by Lakehurst activities. This site is located more than 3,600 feet northeast of the project study area.
- ***Nineteenth-century New Egypt Road Residence***: Following the Civil War several houses were built in remote areas of the Pinelands. One such mansion was said to exist along what was called *New Egypt Road* within or near Lakehurst (Wainwright 1977). However, the Beers Map of 1872 does not indicate any residence along that road within the boundaries of JBMDL Lakehurst. Therefore, the site is unlikely to be found within the JBMDL boundary.
- ***Eddystone "Russian" Proving Grounds Ruins***: The cultural resources survey of 1994 (BEC, 1994) involved a walkover of areas associated with the Eddystone Proving Grounds. Three concentrations of ruins were identified: the main proving ground ruins located between Rockwell and Johnson roads, a smaller set of ruins near Hangars 5 and 6 associated with the Lakehurst Proving Grounds, and ruins associated with trench systems near the Recovery Systems Test Site. The nearest ruin site to Parcel 22 is the main proving grounds area, located over 1,000 feet to the northwest of the project study area.
- ***Hindenburg Crash Site***: The location on Landing Mat #1 of the Hindenburg crash has been addressed as a potential historic archeological site. During World War II the entire area was surfaced to create Landing Mat #1. The soils below Landing Mat #1 have little potential to contain deposits associated with the crash, as the site was meticulously cleaned and investigated (BEC, 1994) Mat 1 is located over 2,000 feet to the southeast of the project study area.

None of these four potential historic archeological sites are in the area of potential effect for Parcel 22. A review of historic maps and archive data was conducted by the JB MDL Acting Cultural Resources Manager and staff indicated that portions of the original Lakehurst Proving Ground operations, specifically a goat pasture and associated farm buildings, were located within the project study area. A pedestrian survey of the project study area was conducted on June 28, 2011 and July 20, 2011 by the JB MDL Acting Cultural Resources Manager and staff. No discernable evidence of former human habitation or use of the site was apparent, except what appeared to be a man-made depression discussed in Section 3.2 "Land Use". Specifically, no significant quantities of building materials were found and there are no foundations visible.

Based a the letter from NJ SHPO dated May 31, 2011, the HPO staff archeologist determined the location of the proposed FAF has low potential to contain National Register of Historic Places eligible archeological resources, and that no further survey work to identify archeological resources would be required (Saunders, 2011).

3.9.4 Historic Architectural Resources

The built environment of Lakehurst constructed prior to the Cold War has been inventoried and evaluated for National Register eligibility. A total of 71 buildings and 3 structures have been determined eligible for the National Register of Historic Places (NRHP) as contributing properties of Lakehurst LTA Historic District (NAES, 2006).

The Lakehurst LTA Historic District is an early air transportation historic district located in the heart of the station. It has a period of significance spanning the entire period of Navy LTA operations from 1921 to 1962. The district is comprised of 74 contributing properties and 10 non-contributing properties. Originally delineated as part of the *Cultural Resources Survey for Naval Air Engineering Station, New Jersey* in 1994 (BEC, 1994), the district was determined eligible for inclusion in the National Register in 1996 (NAES, 2006).

All but one of the 74 contributing properties of the Lakehurst LTA Historic District were constructed between 1919 and 1945 as part of the Navy's LTA aviation program that involved operation of both rigid and non-rigid airships. The main body of the district consists of an industrial area and two arms that extend northwest along Lansdowne Road to a residential/administrative area and southwest along Saniuk Road to Landing Mat 1. A third arm extends northeast to include Hanger 4. The industrial area along Hancock Road contains the main concentration of operational facilities (NAES, 2006).

The LTA District includes Hangars 5 and 6 with the original footprint of Mat 3 (see Figure 3-7). These three properties are Category I, Priority I. Category I properties are those that have been determined eligible for inclusion in the NRHP. Priority I properties are worthy of long-term preservation and investment because they possess significant integrity of location, design, setting, materials, workmanship, feeling, and association. Priority I properties are afforded the highest level of protection.

The project study area is outside the boundaries of the LTA Historic District, the closest portion being Mat 3 that is located 850 feet south of the footprint of the proposed FAF. Mat 3 was named Maxfield Field when it was constructed in 1944 in honor of Commander Louis H. Maxfield, Naval Aviator No. 17, who lost his life in the crash of the dirigible R-38 on August 24, 1921.

3.9.5 Native American Consultation

There are no Tribal Historic Preservation Officers with jurisdiction within the State of New Jersey. However, there are federally-recognized tribes, now located outside the state, that have a cultural ancestral affiliation with the lands comprising JB MDL. JB MDL is in the process of establishing a formal government to government relationship with the Delaware Nation and Delaware Tribe of Indians. The JB MDL Commanding Officer sent letters to these tribes in July 2011 and both expressed interest in reviewing ongoing actions at the base. For specific projects, the tribes requested that information be sent to their Tribal Historic Preservation Officers. No Native American Traditional Cultural Properties, protected tribal resources, treaty rights, sacred sites, or Indian lands are known to be present within the project study areas. However, JB MDL invited these tribes to be consulting parties for this EA under Section 106 of the National Historic Preservation Act (NHPA).

The Delaware Tribe responded that they had no concerns about the project by email on September 7, 2012 (Appendix D). On December 17, 2012, the Delaware Nation responded by letter that the project does not endanger known sites of interest but should the project

inadvertently uncover an archeological site or object(s), that the appropriate State agencies be contacted, as well as the Delaware Nation, within 24 hours (Appendix D). They also requested all construction and ground disturbing activities .be halted until those consultations are conducted. Per Section 2.3.1, those requests would be adhered to under the Proposed Action.

3.10 Socioeconomics

The following subsections identify and describe the socioeconomic environment in Jackson Township, Ocean County, and the State of NJ. Data used in preparing this section was collected from the most recent available Census and Ocean County information.

3.10.1 Demographics

The 2010 census measured populations for the State of NJ, Ocean County, and Jackson Township. The populations of the State of NJ, Ocean County, and Jackson Township increased between 2000 and 2010. The State experienced an increase from 8,414,378 persons to 8,797,739 persons (3.5 percent), and the County experienced an increase from 510,916 persons to 573,678 persons (12.3 percent) (US Census, 2010a). Jackson Township has increased in population by 22.6 percent since 2000 (an increase from 42,816 persons to 52,497 persons).

3.10.2 Regional Economy

The JB MDL Lakehurst area employs a combined workforce of approximately 2,300 military, civilian, and contractor personnel (NAES, 2010). These employees consist primarily of engineers, technicians, logisticians, acquisition experts and support specialists. In addition, Lakehurst supports over 600 military dependants and students. The JB MDL is Ocean County's largest single-site employer, and is ranked among the top 60 employers in the State of NJ.

Between 2000 and 2010, Ocean County grew in population by 12.8 percent, the second highest growth rate of all the counties in NJ. The population density based on the 2010 census is 906 persons/square-mile compared to the state-wide density of 1,185 persons/square-mile.

According to the Census, Ocean County is closely matched to the overall State statistics for percentage of the population with a high school diploma (83 percent and 82.1 percent respectively). However, the percentage with a bachelor's degree in Ocean County is approximately 10 percent less than state-wide (19.5 percent compared to 29.8 percent respectively).

In the 2000 census, government workers made up 16 percent of Ocean County's workforce. The distribution of workers by occupation in Ocean County is shown in Table 3-5. The 2009 estimated unemployment rate for Ocean County was 9.7 percent (Ocean County Profile (Ocean County, 2010).

3.10.3 Local Economy

The Lakehurst portion of JB MDL is surrounded primarily by forest areas, industrial development, the Borough of Lakehurst, and low density residential areas. While the density of businesses and shops in the immediate vicinity of the base is relatively low, there is a higher density of retail businesses originating approximately 5 miles southeast along the Route 37 corridor, and additional retail businesses (of lower density) along Route 547 in Jackson approximately 10 miles to the north of the base. There are also several high density retirement

villages in Manchester and Toms River along the Route 70 and Route 37 corridors to the southwest.

Table 3-5. Ocean County Occupation Distribution

Occupation/ Category	Percent
Management, professional and related occupations	32
Service occupations	16
Sales and office occupations	29
Farming, fishing, and forestry occupations	<1
Construction, extraction and maintenance	12
Production, transportation, and material moving	11

Source: Ocean County, 2002.

3.10.4 Housing

The home ownership rate from the 2000 census was 83.2 percent compared to the state-wide rate of 65.6 percent at that time. With the economic downturn and housing market decline that started in late 2008, it is estimated that the home ownership rate has declined in the last 2 years in Ocean County. According to the State Division of Banking and Insurance, the annual numbers of foreclosures in Ocean County increased steadily from 1,422 in 2005 to a high of 5,191 in 2010. However, this annual figure represents only 1.9 percent of the total housing units in the County. When summing the foreclosures over the period 2005-2010, this represents 7.1 percent of total housing units based on 2009 housing numbers (NJ Division of Banking, 2011). According to 2000 census data, renter-occupied units represented 13.4 percent of all housing units, with half of these units concentrated with in the Townships of Lakewood, Toms River, and Brick (Ocean County, 2006).

3.11 Environmental Justice

3.11.1 Geographic Distribution of Minorities

Table 3-6 presents the ethnic characteristics of the region's population from the 2010 U.S. Census.

Table 3-6. Regional Population Percentage by Race by State, County and Township

Area	White	Black or African American	American Indian, Eskimo, or Aleut	Asian or Pacific Islander	Other Race[2]	More Than One Race[3]	Hispanic Origin[4]	Percent Minority
State of NJ	68.6	13.7	0.3	8.3	6.4	2.7	17.7	49.1
Ocean County	90.9	3.2	0.2	1.7	2.5	1.5	8.3	17.3
Jackson Township	88.8	4.8	0.2	2.5	2.3	1.4	7.8	19%

Source: U.S. Census, 2010a; U.S. Census 2009a.
Notes:
1. The racial classifications used by the Census Bureau were issued by the Office of Management and Budget on October 30, 1997. The Office of Management and Budget requires five minimum category of race, including White, African American, American Indian and Alaska Native or Pacific Islander."

2. The "Other Race" category includes all other responses not included in "White, African American, American Indian and Alaska Native or Pacific Islander." This category also includes entries such as multiracial, mixed, interracial, or a Hispanic/Latino group.
3. For data purposes, this category refers to combinations of two or more of the first six categories.
4. Persons of Hispanic origin may be of any race.

3.11.2 Geographic Distribution of Low-Income Populations

Median household incomes and poverty levels from the U.S. census are presented in Table 3-7. Ocean County's median household income ($59,939) is under the State average of $70,347. Jackson Township has a significantly higher income at approximately $82,977 per household. Only 4.2 percent of the residents in Jackson are at or below the poverty level. This level is significantly lower than the State average of 8.8 percent. Ocean County's poverty level, at 7.9 percent, is slightly lower than the State average.

Table 3-7. Income Statistics for the State, County and Township

Area	Total Population (2009)	Median Household Income (2008)	Total Number of Persons at or Below Poverty Level (ABPL) (2008)	Total Percent ABPL (2009)
State of NJ	8,707,739	$70,347	757,573	8.7%
Ocean County	573,678	$59,199	43,599	7.6%
Jackson Township	51,932	$82,977	2,164	4.2%

Sources: US Census 2010a, US Census 2009a, US Census 2009b

3.12 Infrastructure

3.12.1 Building Infrastructure

Hangar 5, due to its age and condition would require extensive and costly upgrades and renovation to achieve current building codes for its longstanding activities. As such, an engineering study is underway to identify the significant upgrades and renovations needed in both Hangars 5 and 6. Improvements are intended to address risks from fire from wooden construction materials, dated electrical systems, and storage of fueled aircraft. The study would evaluate the costs and ability to install an automatic hangar deck fire suppression system. Fire suppression is currently provided through manual use, wheeled canister extinguishers.

3.12.2 Potable Water Supply

The Hill Water System serves the area from Route 547 to Lakehurst/Maxfield Field Hangar, excluding the Cathedral of the Air, Freedom Park and Building 42 (JB MDL, 2010a). The Hill Water System obtains ground water from five wells. Four of the wells are screened in the Cohansey Aquifer and one deeper well is screened in the Potomac-Raritan-Magothy Aquifer. The wells range in depth from 50 feet to 990 feet. Total pumping capacity of the wells is approximately 560 gallons per minute. Water is treated using lime and soda ash to adjust pH, chlorine for disinfection and a Greensand filter for iron removal. The system stores 400,000 gallons of water in water towers. Lakehurst possesses a NJDEP Water Allocation Permit (#5366), which allows for the diversion of 21 million gallons of water per month from the underlying Kirkwood-Cohansey aquifer.

The closest potable water line to the project study location is at the intersection of Rockwell and Rounds Roads, approximately 700 feet west of the site.

3.12.3 Wastewater Treatment

Most facilities at Lakehurst connect to a base wastewater collection system, including 15 pumping systems, (operated by JB MDL) that ultimately ties into the Ocean County Utility Authority, which provides tertiary treatment for wastewater before it is discharged into the Atlantic Ocean.

The nearest wastewater sewer line to the proposed FAF facility is located at the Fire/Rescue Facility, approximately 1,300 feet to the southwest of Parcel 22. However, once the NJ National Guard Army Aviation Support Facility and its associated wastewater pump station are constructed along Rounds Road, the connection point for the proposed FAF would likely be within 600 feet.

3.12.4 Telecommunications

Telephone and fiber optic lines are located adjacent to the proposed FAF site along Rounds Road.

3.12.5 Energy Supply

3.12.5.1 Electricity

GPU Energy provides electricity to the Lakehurst area of JB MDL. The closest electric line to the proposed project study location is south of the adjacent Cryogenics building, which is a high voltage line (4,160 volt).

3.12.5.2 Natural Gas

Most of the base heating systems use natural gas. There is an extensive network of natural gas lines on the Lakehurst portion of JB MDL, including a 6-inch diameter natural gas line that runs along Rounds Road adjacent to Parcel 22.

3.13 Transportation and Traffic

Ocean County is serviced by several State and Federal highways as well as a network of local and county roads. The major north-south highways are Routes US 9, the Garden State Parkway, Route 35, and County Route (CR) 539. Route 70 is the major access road from the Garden State Parkway and the Philadelphia-Camden area, and the highway connects with other east-west routes such as Routes 72, 37, and 88. Route I-195 is a major interstate freeway providing an express connection between Trenton and the shore area, with links to the New Jersey Turnpike and other major north-south arteries.

Primary access to Lakehurst MDL is from Route 547 that connects to Route 70 to the south and Route 571 to the north. The main gate and commercial gate are located on Route 547. There is also a commuter gate for non-commercial traffic on the south side of the base north of Pinehurst Estates that is open for one-way traffic during peak morning and afternoon commuting hours, accessed via Route 70 (see Figure 3-8).

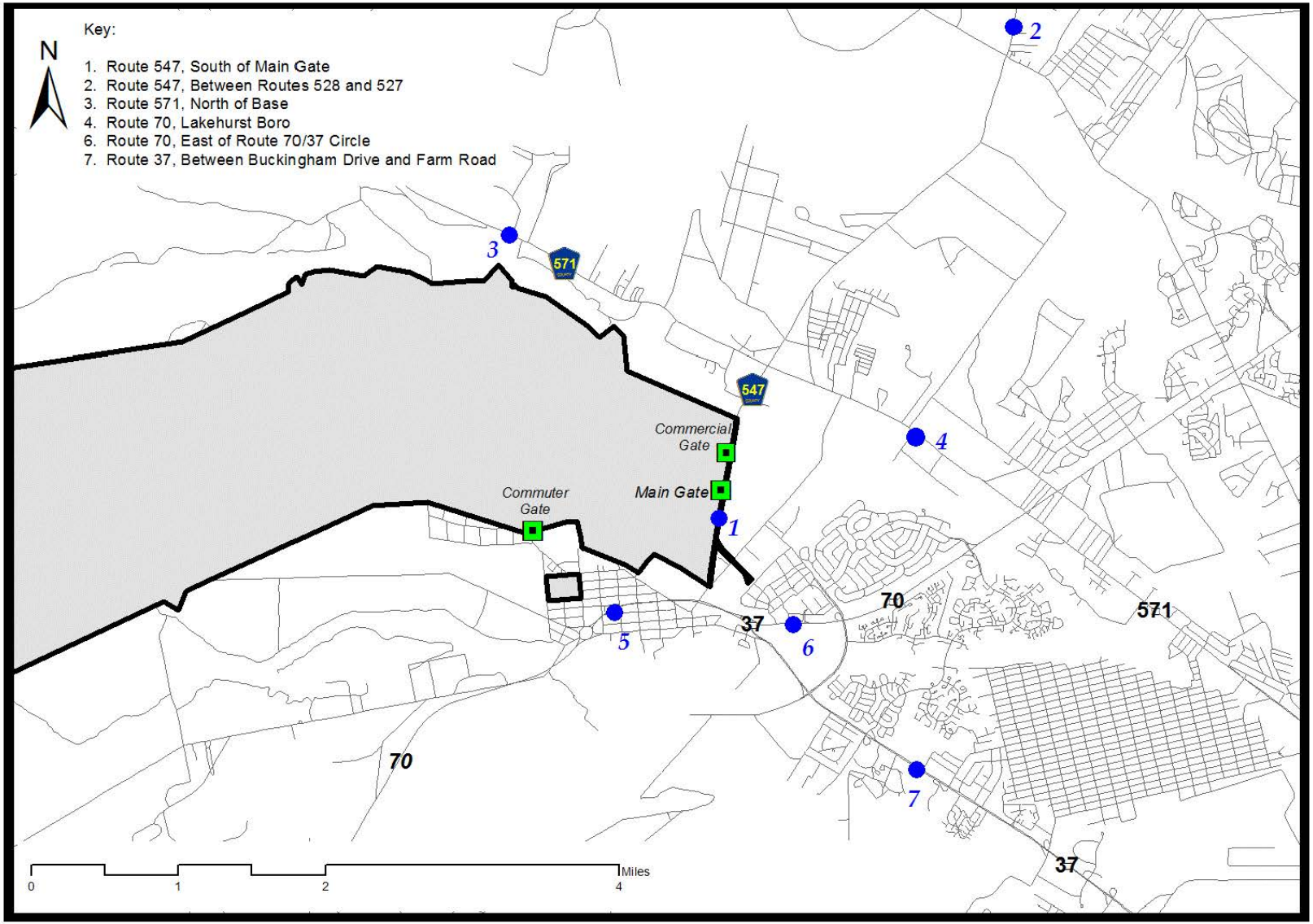

Figure 3-8. Gates and Traffic Count Locations

Peak traffic volume on Route 547 occurs at 7 am in the morning and at 4pm in the afternoon, most of which is assumed attributable to the typical work schedule at JB MDL. The Annual Average Daily Traffic (AADT) on Route 547 is 13,130 (NJ DOT, 2011), which is split almost evenly between north bound and south bound traffic. An average of 1,098 vehicles traveled on Route 547 during peak morning hour (6 – 7 am) based on the 2009 survey. Based on the mix of vehicles counted in a same survey, truck traffic makes up approximately 6 percent of vehicles traveling on Route 547 (1,743 trucks out of 28,535 vehicles over a two day period) (NJDOT, 2011). Table 3-8 provides traffic counts on roads leading to and from the Lakehurst gates.

Annual Average Daily Traffic (AADT) describes the number of vehicles that traverse a road at a specific point on the road system.

Table 3-8. Traffic Counts in the Region of the Lakehurst Gates

Location	Study Dates	AADT (2-way)	Peak AM hour	Peak PM hour
Route 547, near Lakehurst Commercial Gate	9/2- 9/3/2009	13,130	7-8 am	4-5 pm
Route 547, Between Routes 528 and 527	4/23 – 4/26/2007	12,015	6-7 am	4-5 pm
Route 571, North of JB MDL	5/6 – 5/9/2008	10,601	6-7 am	4-5 pm
Route 571, East of Route 547	4/17/2007	10,283	6-7 am	4-5 pm
Route 70, Lakehurst Borough	8/14- 8/17/2007	22,016	10-11 am	4-5 pm
Route 70, east of Route 70/ Route 37 Circle	8/14 – 8/17/2007	15,074	10-11 am	4-5 pm
Route 37 (between Buckingham Drive and Farm Road)	3/30 -4/2/2009	31,555	10-11 am	3 pm

Sources: NJDOT, 2011.

The peak hour morning and afternoon traffic in the region of the Lakehurst gates (Routes 547 and 571) generally coincides with the typical workday start and end times for JB MDL. However, the more traveled corridors (Route 70 and 37) experience later peak morning traffic between 10 and 11 am, probably associated with the opening times of commercial businesses along those corridors. The road with the highest AADT near Lakehurst is Route 37 (southeast of the base) that experiences almost two and a half times more traffic than Route 547 on a daily basis.

3.14 Materials and Waste

Lakehurst has a mature recycling program, including enforcing provisions for recycling construction waste such as asphalt and concrete. In fiscal year 2009, Lakehurst produced approximately 1,100 tons of land-filled solid waste, and recycled almost 1,370 tons of metals, glass, paper and wood. That same fiscal year, the base also recycled approximately 2,680 tons of construction and demolition waste (NAES, 2009b). Lakehurst utilizes the Ocean County Landfill in Manchester Township for non-recyclable waste.

Lakehurst adheres to a Hazardous Material Control and Management Plan which defines the procedures for the handling and disposal of hazardous waste. According to the management plan, each department and tenant must possess a Hazardous Waste Coordinator and Spill Response Coordinator. The CFA in Hangar 5 currently complies with the base HAZMART process where hazardous materials are distributed from a central location and their usage and disposal are tracked. The Spill Response Coordinator and/or the Hazardous Waste Coordinator must be contacted in the event of a spill.

3.15 Safety

3.15.1 Police and Fire Protection

If an emergency requiring police protection occurs, the JB MDL is connected to the 911 Emergency System. The JB MDL Police force provides primary response to emergencies. Its closest headquarters is located 1.3 miles east of the project study area. The Lakehurst Fire Rescue Facility is located across Rounds Road from the proposed FAF site.

3.15.2 Medical Facilities

If a medical emergency occurs, Military medical facilities are available on all three portions of the JB MDL. Civilian medical facilities within close proximity to the Lakehurst portion of JB MDL include the Community Medical Center located in Toms River, NJ (on Route 37 near the Garden State Parkway) approximately 10 miles east of the main gate.

3.15.3 Explosives Material Storage

No explosive materials are currently stored within the project study areas; however, a munitions magazine area is located northeast of Parcel 22. A small area of the eastern portion of Parcel 22 is located within the magazine's ESQD arc (see Figure 3-9). This ESQD Arc provides a safe distance to protect personnel and buildings in the event of an explosion. No occupied buildings are allowed within ESQD arcs.

3.15.4 Munitions and Explosives of Concern (MEC)

3.15.4.1 Large Caliber Munitions

Due to the various historical military activities, dating back to 1918 when the area was utilized as a World War I training camp and a proving ground, there are large areas within JB MDL Lakehurst where unexploded ordnance (UXO) has been encountered.

Parcel 22 is outside of the areas designated by the base as having a potential for UXO to be encountered (see Figure 3-9). However, in November 2001, two intact British 80-milimeter (mm) mortar rounds were documented as discovered on the ground surface in the center of Parcel 22. These rounds were detonated in place.

In 2004, during surveying for the Combined Structural/Aircraft Fire Rescue Station 1,300 feet southeast of Parcel 22, three (3) M49 high explosive 60-mm mortars were discovered. A geophysical survey conducted afterward also discovered a WWI Stokes mortar round, a mortar fuze, and inert, hand grenade throwing shape.

In light of these finds, a UXO detector-aided surface survey was conducted in 2011 within the specified study area (between the Fire Rescue Station and the recycling compound). The survey did not identify potential surface or near-surface ferrous anomalies and there were no visual indications of munitions debris in the area.

3.15.4.2 Small Arms Munitions

There were three firing ranges surrounding Parcel 22 that are no longer active. To the east of the parcel were the Rifle and Pistol Ranges that ceased operation in the mid-1970s. There was also a skeet range that was located within a portion of the southern section of Parcel 22, but

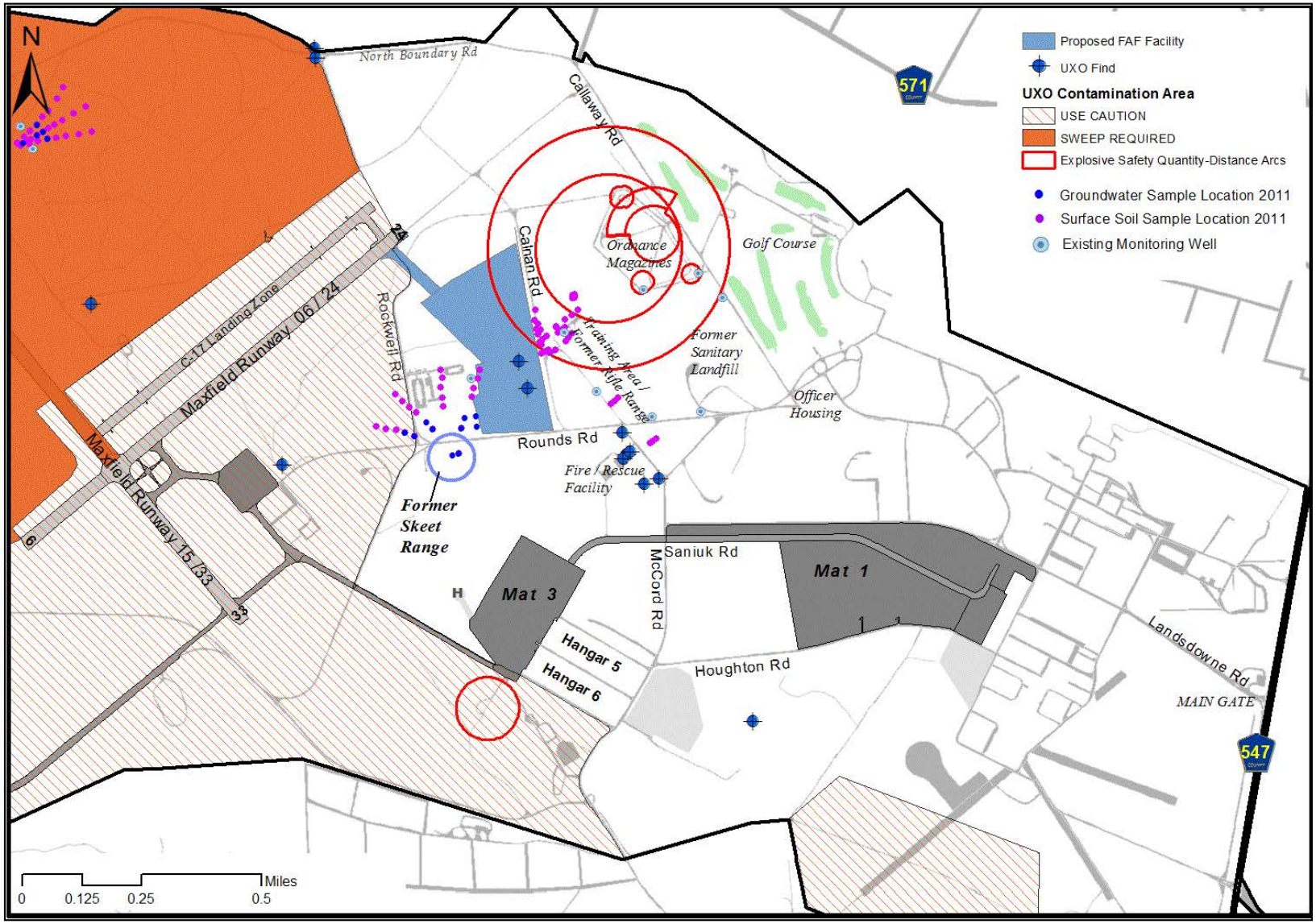

Figure 3-9. ESQDs and UXO Areas

outside the proposed FAF footprint, that ceased operations before 1963. The rifle range was remediated in 1997, in accordance with the NJDEP requirements.

In November 2006, a Final Preliminary Assessment for NAES Lakehurst – Proving Grounds, NJ was completed that assessed MEC at the 3 former small arms ranges around Parcel 22 (UXO Sites 4, 5, 6) and other small arms ranges at Lakehurst (Malcolm Pirnie, 2006).

In June 2011, a Draft Site Inspection Report for the Small Arms Range (UXO Site 4), Skeet Range (UXO Site 5) and Rifle/Pistol Range (UXO Site 6) was completed. Sampling at these sites, and potentially affected adjacent areas, was conducted to determine lead concentrations in the soil and groundwater, as well as other metals, and poly-aromatic hydrocarbons (Tetra Tech, 2011).

While some soil sample locations found levels of lead above the action limit of 400 milligrams/kilogram for lead, these sample locations are outside the proposed footprint of the FAF land disturbance. One sample at the skeet range exceeded the action limits for 5 poly-aromatic hydrocarbon compounds, but this sample location is over 120 feet west of the proposed FAF fenceline and this area would not be disturbed by the project (Tetra Tech, 2011). A summary of the groundwater sampling is provided in Section 3.7.3, that indicates that filtered groundwater does not exceed action limits for metals or poly-aromatic hydrocarbons.

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4. ENVIRONMENTAL CONSEQUENCES

4.1 General Overview

This section identifies potential direct and indirect effects of the alternatives for each resource area described in Section 3 and compares and contrasts the potential effects of those alternatives. The potential environmental, cultural, and socioeconomic effects of implementing each identified alternative, as well as any required mitigation associated with each alternative, are also presented.

4.2 Land Use

4.2.1 Effects of Alternative 1 (Parcel 22)

No significant adverse land use impacts would be anticipated due to implementation of Alternative 1. The present base zoning of Parcel 22 is "aircraft operations and maintenance" with the same designation for the future according to the 2010 *Vision Plan, Naval Air Engineering Station (JB MDL, 2010a*). The Vision Plan encourages the consolidation of aircraft-related operations near the Lakehurst/Maxfield Field runways and Alternative 1 would be consistent with this plan.

The Proposed Action requires development within the Pinelands Preservation Area. However, the construction of the proposed FAF is consistent with the function of the military installation, is sanctioned by JB MDL, and substantively meets environmental compliance standards of the Pinelands Comprehensive Management Plan. The development of the proposed FAF would, with the adherence to environmental requirements in Section 2.3.1 and the sustainable design and construction best management practices described in Section 2.3.2, result in less than significant adverse impacts to the environmental resources of the Pinelands Area.

4.2.2 Effects of Alternative 2 (No Action Alternative)

No adverse land use impacts would result from the implementation of Alternative 2. Continued operation of CFA at the existing facilities at JB MDL Lakehurst is consistent with the current and future land use plans.

4.2.3 Mitigation Measures

No mitigation measures would be required.

4.3 Airspace

4.3.1 Effects of Alternative 1 (Parcel 22)

No adverse impacts would be anticipated to result from the implementation of Alternative 1. The construction and operation of the proposed CFA would allow some additional transient aircraft to be worked on (up to 10 additional takeoffs and landings monthly) but not in numbers that would effectively affect airfield use. There would be no change in the flight patterns for fixed wing aircraft that would continue to utilize the Lakehurst/Maxfield Field runways.

The project would include a new helo spot and would reduce the numbers of departures and landings from Helo Spots 2 and 3. According to CFA pilots, the new helo spot would allow

CERDEC to alter the flight path of their helicopters so they approach the base further west from the Officer's housing area, reducing low approaches over that area and reducing associated noise impacts.

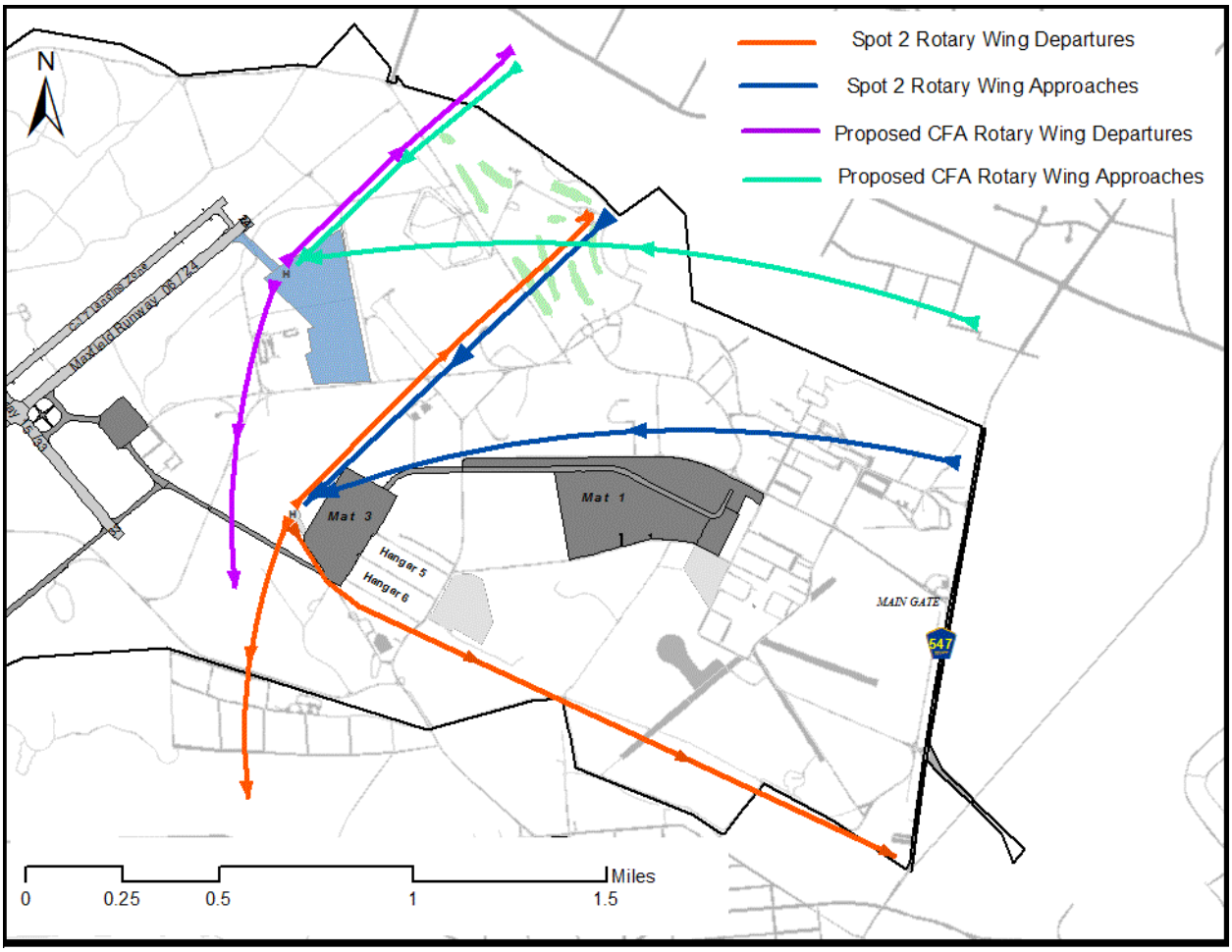

Figure 4-1. Flight Paths to Existing and Proposed Helicopter Spots

Source: CH2M Hill, 1976.

The new taxiway constructed to the approach end of Runway 24 would allow the CFA easier quicker departures than their current location, with nearly equal taxiing distance for returning fixed wing aircraft.

To meet Air Force airfield setback requirements, the CFA would clear trees on the south side of the Runway 24, which would also increase aircraft safety and visibility from the Lakehurst/Maxfield Field tower.

4.3.2 Effects of Alternative 2 (No Action Alternative)

No adverse airspace impacts would be anticipated as a result from implementation of Alternative 2, as no construction would occur. Continued operation at the existing facilities at Hangar 5 and Mat 3 would not impede or alter the current airspace or airfield use in the region.

4.3.3 Mitigation Measures

No mitigation measures would be required.

4.4 Air Quality

4.4.1 Effects of Alternative 1 (Parcel 22)

Air emissions associated with proposed construction activities and operation of the facility are expected to increase slightly.

Fugitive dust from on-site construction activities and mobile source emissions from construction vehicles, equipment, and the motor vehicles of construction workers would occur. Project construction would involve earth movement, grading and other typical construction activities. Exhaust emissions from construction vehicles, personal vehicles, soil erosion, and fugitive dust are all construction issues that would cause minor, short-term air quality impacts.

Based on the analysis provided in Appendix B, the proposed FAF, when added to current emissions at Lakehurst is expected to have total emissions well below the Lakehurst SIP budget for NOx and VOCs; therefore, the Record of Non-Applicability (RONA) satisfies the General Conformity Rule. As such, the RONA documents the CFA's decision not to prepare a written conformity determination for the Proposed Action. Construction BMPs, as described in Section 2.3.1, would sufficiently minimize airborne particulate release. Mobile source emissions during construction would result in direct, minor, short-term adverse air quality impacts.

The CFA would need to obtain air emission permits for their facility's emission sources (e.g., natural gas boiler, diesel generator, and paint booth). As a more energy efficient building, the new FAF offices would result in lower natural gas use per square foot than their current lean-to office facilities in Hangar 5.

No additional commuter traffic would occur under this alternative, resulting in no increase of automobile emissions once the facility becomes operational. However, there would be a minor temporary increase in personal vehicle travel under this alternative from construction workers traveling to and from the site over the 2-year construction phase. These emissions are estimated in Appendix B.

4.4.2 Effects of Alternative 2 (No Action Alternative)

No impact to air quality would be anticipated due to the implementation of Alternative 2, as no construction-related activities would occur and no additional permitted air sources would be required.

4.4.3 Mitigation Measures

No mitigation measures would be required.

4.5 Noise

4.5.1 Effects of Alternative 1 (Parcel 22)

4.5.1.1 Construction Phase (Short-Term)

Construction activities would be scheduled during daytime hours when background noise levels would generally be higher, and when many people are at work and away from home (i.e., between 7:00 a.m. and 6:00 p.m.)

During the construction phase, increases in noise levels would mainly result from the use of heavy construction equipment (e.g., bulldozers, scrapers, dump trucks, and concrete mixers). The noise levels presented in Table 4-1 reflect levels at a distance of 50 feet from the equipment source. With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods when construction activities take place.

Table 4-1. Noise Levels of Typical Construction Equipment at 50 Feet from Source

Source	Noise, dBA
Truck	91
Crane	83
Roller	89
Bulldozers	80
Pickup Trucks	85
Backhoes	85
Jack Hammers	88
Pneumatic Tools	86
Air Compressors	81
Compactor	82
Grader	85
Loader	85
Chainsaw	105
Wood Chipper	110

Source: Bolt, Beranek, and Newman, 1971.

Construction noise levels onsite would primarily be limited to the immediate vicinity of the project site where the primary receptors would be construction workers. However, adherence to appropriate Occupational Safety and Health Administration standards and use of hearing protection would protect the workforce from excessive noise.

Numerous trucks delivering equipment and materials to the site would travel along base roads to the site, increasing noise temporarily to receptors while they are passing by.

Noise levels from the construction area to the nearest offsite sensitive receptors (Officer's Housing) can be estimated using the following equation:

$$Lp2 = Lp1 - 20 \log10 (r2/r1)$$

where Lp2 is the predicted noise level at the receptor location, Lp1 is the noise level at the measurement location, r2 is the distance from the noise source, and r1 is the distance where the Lp1 reading was taken from the noise source.

However, sound levels have been shown to be attenuated by vegetation and forests. The scattering of noise by forests is most likely for high frequency noise sources, such as

construction equipment, and depends on the density and trunk size of trees. Bullen and Fricke developed an equation for estimating the scattering attenuation through forests of:

*Scattering Attenuation (dB) = 8.5 + 0.12*d (meters) (USACE, 2004)*

There are at least 700 feet (213 meters) of dense wooded area between the proposed construction site and the Officer's Housing Area. Thus, highest level of construction noise perceived from the nearest residential receptor is estimated to be:

*Lp2 = [110 dBA – 20 Log10 (2700 feet/50 feet)] – [8.5 + (0.12 * 213 meters)] dBA*
= 41.3 dBA (e.g. perceptible but below normal background noise levels)

Trucks delivering materials to and from the site would pass within 0.25 miles of this residential area, resulting in intermittent, short-lived noise levels of up to 63 dBA

4.5.1.2 Operational Noise (Long-Term)

Primary noise sources at and around the project study area would include:

- CFA's own aircraft operations and helo-spot takeoffs and landings;
- aircraft noise from C-17 and other aircraft utilizing the Lakehurst/Maxfield Field runways;
- aircraft operations on Mat 3 (across the street); and
- infrequent USAR training operations adjacent to their eastern boundary and 800 feet from proposed occupied spaces within the FAF.

Noise Levels at the Proposed FAF

Under the Proposed Action, the number of additional aircraft that could be accommodated for retrofits would increase from 6 to 10. The associated daily air operations at Lakehurst would increase by up to 2 operations per day (see Section 2.3). This would be a 2-4 percent increase over the 2010 daily average air operations at Lakehurst. There would be little to no increase in night-time air operations under the Proposed Action. Consequently, the Day-Night Average Sound Level (DNL) at Maxfield Field would not be significantly affected by the Proposed Action.

The new helo spot would be located approximately 950 feet from proposed FAF office spaces. A UH-60 helicopter can create noise at a single exposure level (SEL) of up to 115 dBA during departure. This would result in sound exposure levels outside the proposed FAF office area of 81 dBA. During USAR concrete breaking exercises, noise levels of outside the proposed FAF office area would be approximately 67 dBA.

Continued use of Helo Spot 2 on Mat 3 by the Army Aviation Support Facility would produce helicopter noise at a distance over 2,000 feet from the FAF, or a SEL of 75 dBA at the FAF boundary during takeoffs and landings. The DNL in the area from Lakehurst/Maxfield Field aviation operations in the Site 22 area would be between 65 and 75 dBA.

Under Army Pamphlet 40-501, personnel exposed to steady state noise levels with a time-weighted average of 85 dBA or greater must take hearing protection measures. The CFA would continue its existing hearing conservation program, taking into consideration the proposed configuration of the building, mat, and helo spot to determine when hearing protection is

required of workers in different roles. Consequently, the impact on outside workers from intermittent aircraft noise would be negligible to minor. With appropriate configuration of the building (where parts of the hangar could block noise from these sources), wall and ceiling insulation, and windows with adequate sound reduction, workers within the offices at the FAF would not have their hearing impaired from these exterior noise sources.

Noise Levels at Off-Site Receptor Locations

The closest non-CFA worker receptors would be located at the Hazardous Waste/Recycling/Cryogenics facility and at the USAR training area. When aircraft are taxiing or helicopters taking off, there would be temporary SEL of up to 81 dBA at those locations. The noise would be intermittent and fall below the Air Force 8-hour hearing protection standard of 85 dBA, resulting in minor impacts to off-site daytime workers.

The nearest residential receptors of the new helo spot would be Officer's Housing located 0.7 miles away, with large expanses of trees and vegetation (700 feet) in-between that would help dampen SEL to less than 50 dBA at the housing area during takeoffs and landings. The nearest off-base residential receptor to the helo spot is located 0.8 miles away, with at least 1,500 feet of dense forest between these locations, resulting in negligible impacts to these receptors. During night-time, sound exposure levels would be perceptible to residents in the Officer's Housing area, but would fall well below the typical thresholds for physiological reaction to noise (>50 dBA) or for disrupting deep sleep (>60 dBA) (Siebein and Lilkendey, 2010). Off-base residents would continue to experience the same or similar day and nighttime noise levels when compared to current CERDEC helicopter overflights.

Based on existing rotary wing departures and approaches to Helo Spot 2 on Mat 3, the new helo spot would allow the flight path to move approximately 0.3 miles further west from Officer's Housing, further reducing intermittent noise levels experienced at the housing area during the day and night.

4.5.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, the CFA would continue their existing aircraft operations and hangar operations in the same areas and there would be no change to the noise levels they generate or the noise levels workers experience. There would be no noise associated with major construction of a new facility, although minor construction related to repair and maintenance within Hangar 5 would occur when needed, but would be short-term in duration and largely confined within the building.

4.5.3 Mitigation Measures

No mitigation measures would be required.

4.6 Geology, Topography, and Soils

4.6.1 Effects of Alternative 1 (Parcel 22)

Implementation of Alternative 1 would involve extensive tree clearing and soil grading during the initial construction phase. As a result, there would be a high potential for soil erosion by wind and rain if adequate soil conservation practices are not followed. However, the CFA would obtain certification of a soil erosion and sediment control plan by the Ocean County Soil

Conservation District and obtain an authorization to discharge stormwater associated with a construction activity under the NJDEP general permit.

None of the soils within the project study area are considered Prime Farmland soils or soils of state-wide importance. Furthermore, no substantial changes to the topography of the project area would be anticipated. The geology of the area would not require special building engineering or design elements.

With the adherence to construction requirements in Section 2.3.1 and the sustainable design and construction best management practices described in Section 2.3.2, there would be minimal impact to geology, topography and soils.

4.6.2 Effects of Alternative 2 (No Action Alternative)

No adverse impacts to geology, topography, and soils would result from implementation of Alternative 2, as the construction of the proposed FAF would not occur. There would be no ground disturbance associated with implementation of this alternative.

4.6.3 Mitigation Measures

No mitigation measures would be required.

4.7 Water Resources

4.7.1 Effects of Alternative 1 (Parcel 22)

No significant, adverse impacts to surface water resources would be anticipated due to implementation of Alternative 1, provided that protective measures required by the Ocean County Soil Conservation District permitting process are followed.

Construction of the proposed facilities would involve paving a large portion of currently vegetated areas, increasing the amount of impermeable surface area and the potential for additional runoff into storm water receptors. A storm water collection system would be constructed to collect the storm water runoff and recharge it to groundwater in the immediate area. Stormwater discharges must meet the requirements of NJAC 7:8 "Stormwater Management Rule" and the Energy Independence and Security Act of 2007, Section 438 "Stormwater Run-off Requirements for Federal Development Projects".

No wetlands or 100- or 500-year floodplains are located within the Alternative 1 project study area; therefore, no adverse impacts to these water resources would be anticipated due to implementation of Alternative 1.

Although a portion of Parcel 22 is located within a Tier 3 Well Head Protection Area, the construction-related activities associated with the proposed FAF would not contribute groundwater contamination and would not affect water quality within the Hill Community Water System. Aircraft washing would continue to be conducted at an existing, environmentally-compliant aircraft wash rack that removes oil and dirt and recycles the water.

4.7.2 Effects of Alternative 2 (No Action Alternative)

No adverse surface or groundwater impacts would occur from the implementation of the No Action Alternative, as the construction and operation of the proposed FAF would not occur.

4.7.3 Mitigation Measures

No mitigation measures would be required.

4.8 Biological Resources

4.8.1 Effects of Alternative 1 (Parcel 22)

Implementation of Alternative 1 would result in the removal of 37 acres of existing forest vegetation within the project study area during site preparation for the proposed project construction.

The noise and tree removal activities would cause birds and animals to leave the area and seek other locations both on and off the base to reside and forage in. During construction, the frequent presence of people and heavy equipment (and associated construction noise) plus the removal of vegetation would likely keep animals and birds from returning to the site.

Based upon information received from the USFWS, no Federally-listed threatened or endangered species are located within the Alternative 1 project study area; therefore, no further consultation with the USFWS pursuant to Section 7 of the ESA is required. The USFWS requested that tree cutting be conducted outside of the migratory bird breeding season of March 15 to July 31 to reduce impacts on migratory birds. According to the information received from NJDEP, 11 State-listed threatened and endangered, or species of concern could be located at or in the vicinity of the Alternative 1 project study area. Based on habitat requirements, both forest species and grassland species would be affected by construction and operation of the FAF.

The 37 acres of tree removal represents 1.1 percent of the Lakehurst area's forest, and 4.9 percent of mixed forest (>50% coniferous with >50% crown closure). Removal of plant communities and habitat, and subsequent displacement of animal species, would result in minor, long-term adverse impacts to biological resources at Lakehurst.

As described in Section 2.3.1, the JB MDL would seek bids for the forestry products cleared from the site in accordance with AFI 32-7064.

The construction of a new taxiway to Runway 06/24 would disturb and pave approximately 3 acres of current grassland habitat in the clear zone. This would reduce the approximately 1,700 acres of grassland habitat at Lakehurst by less than 0.2 percent, resulting in minor impacts to this habitat. During land clearing, there is potential to disrupt and harm State-listed threatened and endangered grassland birds during the nesting season, however these impacts would be reduced to minor levels by avoiding the start of the construction during the period of April 15 through July 31 (see Section 2.3.2).

Based on the extensive snake monitoring program data at Lakehurst, there are no known hibernacula or nests for the Northern Pine Snake (State-Threatened) on the proposed FAF site. Walkovers of the site between April and July 2011 by the Natural Resources Manager (who has managed the Lakehurst Northern Pine Snake monitoring program for more than a decade) revealed no suspected nest sites. The Lakehurst INRMP includes protective buffers of 350 feet around known hibernacula and 150 feet around single nest sites for the Northern Pine Snake; consequently, the project would be in compliance with the INRMP's Northern Pine Snake protection elements. Based on numerous previous sightings within a quarter-mile of the site on

all sides, the site is considered foraging habitat for the pine snake. The loss of 1.1 percent of Lakehurst's forested area would not pose an irreversible adverse impact on foraging habitat that is critical to the survival of the relatively abundant local population of Northern Pine Snakes on Lakehurst. Given the relative abundance of pine snakes on Lakehurst, it is always possible that hibernacula or nests could be inadvertently uncovered or disturbed by construction activities. The Natural Resources Manager would periodically monitor construction activities for the presence of snakes and construction personnel would be required to contact the Natural Resources Manager at 732-323-2911 if snakes are discovered (see Section 2.3.2If snakes are discovered, the Natural Resources Manager would attempt to capture and relocate them to other suitable habitat on the base (north of the Maxfield runways).

In a letter from NJDEP on September 27, 2011, the State Division of Fish and Wildlife concurred with the timing restrictions and other mitigative efforts described in this EA for the project (see Appendix D). The Division of Fish and Wildlife concurs with the Finding of No Significant Impact. The Division of Fish and Wildlife Endangered and Nongame Species Program would like to be consulted on any mitigative efforts to compensate for minor Pine Snake foraging habitat loss from the Proposed Action. Consequently, the Natural Resources Manager would contact the Program prior to implementing the proposed artificial hibernacula to obtain their input. The artificial hibernacula would conform to a design developed by Herpetological Associates that has been accepted by the NJDEP on several previous projects.

4.8.2 Effects of Alternative 2 (No Action Alternative)

Under the No Action Alternative, CFA activities would remain located in Hangar 5 and there would be no land disturbance. There would be no impact to biological resources under this alternative.

4.8.3 Mitigation Measures

With the adherence to construction requirements in Section 2.3.1 and the sustainable design and construction best management practices described in Section 2.3.2, no mitigation measures would be required.

4.9 Cultural Resources

4.9.1 Effects of Alternative 1 (Parcel 22)

No impacts to cultural resources would be anticipated due to the implementation of Alternative 1. The proposed site location has low potential to contain National Register of eligible archeological resources (Saunders, 2011). If Native American cultural resources are inadvertently discovered during ground disturbing activities or normal operations at the proposed Alternative 1 site, JB MDL would ensure compliance with all applicable statutory, regulatory, and policy requirements, and would act in accordance with the approved Lakehurst ICRMP (NAES, 2006) (see Section 2.3.1).

The proposed project site is outside the boundaries of the National Register eligible LTA Historic District. However, due to the proximity of the boundary of the LTA Historic District to the Alternative 1 location, indirect effects (including visual, atmospheric, or audible elements) that diminish the integrity of the LTA District must be considered. An assessment of the potential for indirect visual effects of the proposed Alternative 1 was conducted on June 28, 2011 by the JB MDL Acting Cultural Resources Manager and staff. Although the proposed project is within the

viewshed of LTA Hangars 1, 2, 3, 5 and 6, the line of sight is obstructed by existing parking lots and storage of military equipment essential to the JB MDL mission. In addition, a stand of mature trees would partially obstruct the majority of the proposed construction. The exterior building materials of the FAF would comply with the architectural compatibility standards for the JB MDL Lakehurst/Maxfield Field area (Figures 4-2 and 4-3). Although the proposed building would be completed in a different architectural style than that of Hangars 5 and 6, the facility would be situated more than 2,000 feet from the historic structures and would not diminish the views or setting of the LTA District from the primary viewing areas. Therefore, the proposed Alternative 1 is considered not to have an indirect adverse visual effect on the LTA Historic District. In a letter dated September 23, 2011, the SHPO concluded that the proposed undertaking will have no adverse effect on the Lighter-Than-Air Historic District (See Appendix D).

Figure 4-2. Conceptual Building Massing, FAF Facility

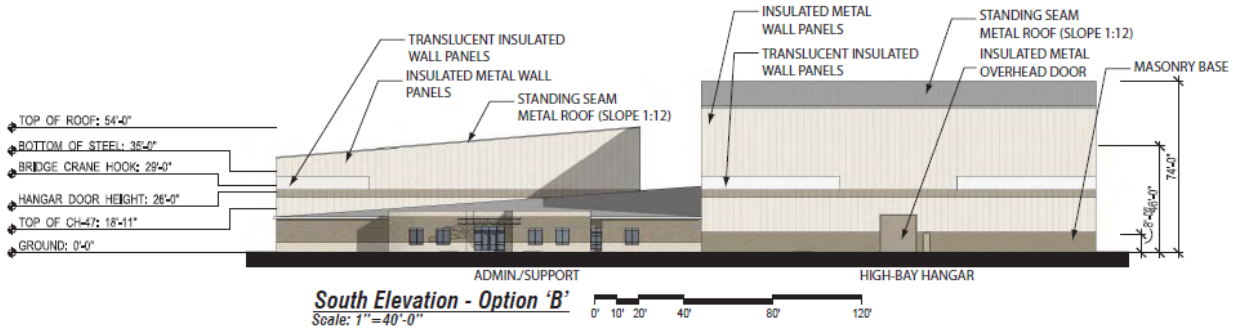

Figure 4-3. Building Features and South Elevation of the Proposed FAF (Facing Mat 3)

The proposed FAF would not result in noticeable changes to traffic patterns or road configuration in the vicinity of the LTA District and would not introduce road noise or traffic that would adversely affect the historic resource. The current Mat 3 area is within the LTA District and is actively used for helicopter operations and aircraft staging. The use of Mat 3 for aircraft operations would continue under Alternative 1, as there are many tenants other than the CFA that use this area. The noise and visual effects from aircraft taxiing and helicopter takeoffs and landings at the proposed FAF would be compatible with the current Mat 3 setting and use.

In addition to these potential effects, the potential indirect effects of the primary tenant vacating Hangar 5 were considered (Saunders, 2011). Under the current license between CFA and JB MDL, the CFA is responsible for routine maintenance and upkeep of Hangar 5. As stated in Section 2.3, the CFA's contractor operations would remain in Hangar 5 within stand-alone building inside the hangar. The hangar deck would continue to be utilized by the CFA intermittently for overflow aircraft parking. Consequently, the hangar would continue to be occupied, although to a lesser degree than under the No Action Alternative. JB MDL would continue to work closely with the SHPO to remediate any potential adverse effects of reuse of Hangar 5.

4.9.2 Effects of Alternative 2 (No Action Alternative)

No adverse impacts to cultural resources would be anticipated from the implementation of the No Action Alternative, as the construction of the proposed FAF would not occur. Any repairs or alterations to Hangar 5 to remedy deficiencies would be conducted in accordance with the ICRMP and SHPO would be consulted as appropriate.

4.9.3 Mitigation Measures

No mitigation measures would be required.

4.10 Socioeconomics

4.10.1 Effects of Alternative 1 (Parcel 22)

Implementation of Alternative 1 would likely require utilization of regional contractors for construction of the proposed FAF. It is anticipated that the construction of the FAF would employ an average of 40 construction workers (full-time equivalent) over the two year construction period. During peak work activity, the actual number of workers at the site may be higher temporarily. Hiring regional contractors could provide short-term jobs and revenue to local and regional residents, resulting in minor, short-term positive impacts to the regional economy.

Approximately 225 personnel are currently employed by the CFA. No new long-term jobs are expected to be created due to the proposed relocation of CFA activities.

4.10.2 Effects of Alternative 2 (No Action Alternative)

No socioeconomic impacts would result through the implementation of the No Action Alternative, as the construction of the proposed FAF would not occur.

4.10.3 Mitigation Measures

No mitigation measures would be required.

4.11 Environmental Justice

4.11.1 Effects of Alternative 1 (Parcel 22)

No disproportionate impacts to minority populations, low-income populations, or Native American tribes would occur due to the implementation of Alternative 1.

The facility would not cause significant adverse effects to the environment that would negatively affect the health or quality of life of on-base or off-base residents. The construction of the proposed FAF may require utilization of regional construction businesses and material suppliers for the construction of the proposed project components at JB MDL. Hiring regional businesses that may utilize minority and low-income employees would provide jobs for persons within these populations. Therefore, a short-term, minor positive impact to minority and low-income populations could be anticipated if contractors utilize minority and low-income employees.

4.11.2 Effects of Alternative 2 (No Action Alternative)

No disproportionate impacts to minority populations, low-income populations, or Native American tribes would occur due to the implementation of Alternative 2, as the construction of the proposed FAF would not occur.

4.11.3 Mitigation Measures

No mitigation measures would be required.

4.12 Infrastructure

4.12.1 Effects of Alternative 1 (Parcel 22)

4.12.1.1 Building Infrastructure

Alternative 1 would provide the CFA an efficient, code-compliant facility to conduct their operations. While the costs for building operation and maintenance of the FAF would be significantly less than their current facilities in Hangar 5, CFA and JB MDL costs for maintaining the integrity of Hangar 5 would continue.

4.12.1.2 Utility Infrastructure

Construction of the proposed FAF at Lakehurst would require the connection/installation of water, sewer, telephone, and/or electrical service to the new facility. These utilities currently exist within the vicinity of the project study area. Overall, minimal alteration of utility infrastructure would be anticipated.

To connect to the County's sanitary system, a new pump station and pipelines would need to be constructed. However, connecting to the sanitary system would be preferable than construction of an on-site septic system that would require an individual National Discharge Pollution Elimination System, Discharge to Groundwater permit (requiring an operator and monitoring). CERDEC would be required to provide a connection between the FAF and the County sanitary system regardless of the timing or completion of the planned nearby Army Aviation Support Facility sanitary line pump station and pipelines.

There is sufficient capacity in the Hill Water System to supply the FAF. The CFA expects a net decrease in overall personnel within the next 5 years, reducing water demand. Therefore, no adverse impacts to water supply would be anticipated due to the implementation of Alternative 1. The wastewater system at Lakehurst can accommodate the expected increase in sanitary sewer discharges resulting from the construction and operation of the proposed FAF.

4.12.2 Effects of Alternative 2 (No Action Alternative)

4.12.2.1 Building Infrastructure

Under the No Action Alternative, the CFA would continue operations in Hangar 5 and would fund the cost of building repairs in an incremental fashion. The high cost of building repairs would likely result in the phasing of large projects (such as upgrading the electrical system and adding a hangar deck fire suppression system). Until key upgrades or renovations are made to Hangar 5, present facility conditions create potential safety hazards and risks to the continued level of operations and support activities currently conducted.

4.12.2.2 Utility Infrastructure

No changes to water, sewer, telephone, and/or electrical service would be anticipated due to implementation of Alternative 2, as the construction of the proposed FAF would not occur.

The electric utilities at Hangar 5 are currently undersized for their current mission and could pose a safety hazard in the future. To correct this deficiency, it is likely that additional electric service lines or transformers would need to be installed.

4.12.3 Mitigation Measures

No mitigation measures would be required.

4.13 Transportation and Traffic

4.13.1 Effects of Alternative 1 (Parcel 22)

As stated in Section 3.10.2, the Lakehurst portion of JB MDL employs 2,300 military, civilian and contractor personnel. During the peak hour morning timeframe, approximately 550 vehicles travel through the main gate.

During the construction phase, it is estimated that an average of 40 workers would travel to and from the site daily, and an average of 10 trucks per week would make deliveries (see assumptions in Appendix B, Section 5.1). The extra construction workers would result in up to a 7.3 percent increase in peak morning traffic levels at the gate, and a 3.6 percent increase in peak morning traffic on Route 547 overall, which would cause minor impacts to traffic on Route 547. An extra 10 trucks per week on Route 547, even if they all arrived on a single day, would result in an increase of only 2.3 percent to overall truck traffic. Other major roads in the study region (Routes 70 and 37) experience much higher traffic levels than Route 547 and the impacts of the extra construction worker vehicles on these roads would be insignificant.

4.13.2 Effects of Alternative 2 (No Action Alternative)

There would be no impact to transportation routes or traffic under Alternative 2, as the construction of the proposed FAF would not occur.

4.13.3 Mitigation Measures

No mitigation measures would be required.

4.14 Materials and Wastes

4.14.1 Effects of Alternative 1 (Parcel 22)

The removal of trees from the parcel would result in the largest construction waste stream for the project. This waste may be in the form of logs and wood chips. As described in Section 2.3.1, the JB MDL would seek bids for the forestry products cleared from the site in accordance with AFI 32-7064.

Primary construction materials would include structural steel, concrete, asphalt, and corrugated steel siding and roofing. There are several concrete, aggregate, and asphalt plants within 25 miles of the base that could readily supply these materials. There are also at least 5 structural steel and other metals suppliers within 10 to 50 miles of the base.

Whenever heavy equipment is operated, there is potential for inadvertent spills or leaks of fuel or hydraulic oil. The potential for spills or leaks would be minimized provided that the best management practices described in Section 2.3.2 are implemented.

There is also potential for wind-blown materials to create a Foreign Object Damage hazard at Runway 24 due its proximity to the work site. This hazard could be reduced as long as the construction best management practices described in Section 2.3.2 are followed.

As a Silver LEED facility, construction practices could include:

- Recycling or salvaging 75 percent of building construction waste;
- incorporating building materials with at least 10 percent recycled content;
- obtaining at least 20 percent of construction materials regionally; and
- using low-emitting materials.

The use of recycled-content and regional materials would reduce impacts on the environment when compared to using traditional building materials. Overall, Alternative 1 would have minor impacts on regional material supplies and would produce minor amounts of waste from construction activities.

4.14.2 Effects of Alternative 2 (No Action Alternative)

There would be no impact to material supplies or waste generation levels under Alternative 2, as the construction of the proposed FAF would not occur.

4.14.3 Mitigation Measures

No mitigation measures would be required.

4.15 Safety

4.15.1 Effects of Alternative 1 (Parcel 22)

The proposed FAF would provide a safer facility for the CFA to operate from than Hangar 5. It would fully comply with modern building codes and provide necessary fire protection features for their hangar spaces. The building would be in close proximity to the Fire/Rescue Facility so that there would be rapid response to emergencies.

The building and aircraft mat would be located outside of the EQSD arc for the magazine to the east of Parcel 22, eliminating hazards associated with potential explosions at that site.

Portions of Parcel 22 and the rifle range adjacent to it are undergoing investigation to determine impacts to soil and groundwater from past skeet and rifle range activities. The portion of Parcel 22 to be used by the CFA does not have any identified contamination issues from those range activities.

Parcel 22 is located outside identified UXO contamination areas (Figure 3-10) where sweeps are required or caution is advised. Although Parcel 22 is in an area of low probability of encountering UXO, two pieces of large caliber munitions (potential UXO) were discovered on the surface of the site in 2001. Recent surveys and site walkovers have not revealed any further UXO although, as with most locations on Lakehurst, it is possible that land clearing could uncover additional UXO. Therefore, there is potential risk to worker safety during land clearing if UXO is encountered. In order to minimize safety risks to workers who may unexpectedly encounter or discover UXO, proper procedures should be followed as instructed in pre-construction safety briefings. As stated in Section 2.3.1, a pre-construction safety brief would be provided by JB MDL to the construction contractor team outlining how to recognize UXO and the steps to follow. If UXO is discovered, all work would cease, workers would muster at an off-site location, and the discovery would be reported immediately to the base dispatch office at 732-323-4000.

Following land clearing and completion of facility construction, the potential for encountering UXO would be very unlikely and risks to workers on the site would be low to negligible.

4.15.2 Effects of Alternative 2 (No Action Alternative)

Under Alternative 2, the CFA would continue to occupy Hangar 5. The cost of repairing the hangar is $58.8 in 2011 dollars while the cost of a new facility is $47M. The JB MDL currently has no major repairs listed in its program plan for Hangar 5, although an engineering study of Hangars 5 an 6 is underway (Bros, 2011). While repairs would be conducted when funding is available, it would take several years to meet all modern building codes. Consequently, Alternative 2 could have a negative impact on CFA employee safety over the short term.

4.15.3 Mitigation Measures

No mitigation measures would be required.

4.16 Cumulative Impacts

The CEQ regulations implementing NEPA requires the consideration of cumulative impacts as part of the process. “Cumulative impacts result from the incremental impact of the Proposed Action when added to other past, present and reasonably foreseeable future actions” (40 CFR

1508.7). Secondary impacts are those that are caused by the Proposed Action, but may occur later in time or farther removed in distance, relative to the primary impacts of the Proposed Action.

Relevant actions (those that could result in cumulative impacts) and their Regions of Influence include:

- Construction projects planned within 5 miles of the Proposed Action that could compete for resources or affect traffic levels, noise, air quality, water quality, or forest habitat.
- Transportation projects planned within 10 miles of the Proposed Action that could alter traffic patterns or cause travel delays during the FAF construction phase.
- Past, ongoing and foreseeable actions that affect regional airspace use or operations at Lakehurst/Maxfield Field.

Table 4-2 provides a list of relevant past, present and reasonably foreseeable projects, their location, and resources most likely to be affected by their construction or operation. Figure 4-4 shows the location of off-base projects.

4.16.1 Cumulative Impacts Associated with the Proposed FAF at JB MDL

4.16.1.1 Land Use

The proposed FAF and approved AASF would use approximately 76 acres of the 529 acres of developable parcels identified in the 2010 Vision Plan or 14 percent. This would leave approximately 60 acres of developable parcels in the vicinity of Lakehurst/Maxfield Field for future aviation-related development.

Continued residential development is expected outside the base to the north and east of Lakehurst/Maxfield Field (Miele Farms, Grawtown Estates, and River Pointe) that could potentially cause conflicts with airfield use in terms of noise. The Legler Service Area water main extension to connect that area with the Jackson Municipal Utilities Authority may further enable residential development in that area. The changes to the Sewer Service Areas surrounding the base may also encourage development in areas where new service is extended but the plan also aims to limit expansion in areas that are environmentally sensitive and does not affect Pinelands designated Regional Growth Areas, Towns, or Villages. The presence of a new Super Wal-Mart on Route 37 is likely to attract additional development in the area, although this project includes the preservation of 212 acres near that site.

JB MDL and the County have been working together closely for several years to preserve land around the base to limit encroachment. The easement and fee simple purchase of portions of the Clayton Sand Mine would significantly limit future residential encroachment.

Overall, the cumulative impacts of the FAF and other projects on JB MDL would have a minor impact on land use on base. Off base, the cumulative impact of the changes to land use surrounding the base would have a minor impact on the operations of the proposed FAF.

4.16.1.2 Airspace

As the aviation operations of the CFA would not substantially change, the FAF would have little to no impact on aviation operations in the region. Cumulatively, the competition for airspace

both within JB MDL and in the vicinity will continue to increase due to incoming programs such as the Joint Strike Fighter test program, LEMV, increases to C-17 landing zone operations, and expansion of the Robert Miller Airpark.

As the Air Force plans to retire 22 of its oldest C-5s in FY2011, they will begin to be replaced with C-17s. The 105th Airlift Wing out of the New York Air National Guard, Stewart International Airport in Newburgh New York will be replacing its fleet of 13 C-5s with C-17s, requiring an additional 1,620 short-field landing operations at the JB MDL Maxfield Field when compared to the number established in the Environmental Assessment, East Coast Basing of C-17 Aircraft, Department of the Air Force, Air Mobility Command, September 2005. Similarly, the 167th Airlift Wing at Eastern West Virginia Regional Airport in Martinsburg would bed down 8 C-17s, requiring an additional 1,620 training operations per year at Maxfield. These operations will primarily be daytime closed pattern operations (NGB, 2011). However, the current numbers of C-17 operations at Maxfield are less than half the amount anticipated in the September 2005 study, indicating that the extra 3,240 operations per year would not have a substantial impact on airspace or airfield use at JB MDL.

The CFA also proposes to construct a Radio Receiving and Transmission Site (RRATs) for provide a fixed site for calibration and testing of airborne collection and direction finding systems. The antennas would be up to 100 feet in height and aircraft would operate off-shore, with no increase of air operations on JB MDL. With proper FAA notification, marking and lighting, the RRATs would not result in adverse cumulative impacts on local airspace.

4.16.1.3 Air Quality

Implementation of the proposed FAF would result in direct, short-term adverse impacts associated with fugitive dust emissions caused by construction activities. These impacts would be reduced the application of BMPs and dust control measures during construction activities and would not contribute to cumulative impacts. Thus, minor adverse, cumulative, air quality impacts would be anticipated as a result construction activities associated with the proposed FAF and other proposed projects within the vicinity.

4.16.1.4 Noise

The proposed FAF would not substantively increase air operations at JB MDL above their current levels. Consequently, the long-term noise from the FAF would not contribute to cumulative adverse noise impacts. Other projects in the Region of Influence that will increase air traffic would have cumulative impacts on noise in the region (on and off base), including increased use of Lakehurst/Maxfield Field at JB MDL by C-17 aircraft and Army National Guard aviation operations, the basing of the LiMA, short-duration testing of the Joint Strike Fighter, and the expansion of operations at the Robert Miller Airpark.

4.16.1.5 Wetlands and Floodplains

The construction of the FAF would not impact wetlands or floodplains. Therefore, no cumulative impacts as a result of Alternative 1 are expected.

4.16.1.6 Surface Water/Groundwater

Implementation of Alternative 1 would result in less-than-significant cumulative impacts to surface/groundwater resources due to the construction and operation of the proposed FAF, due to the potential for soil erosion and sedimentation, as well as the development within portions of an unnamed stream, provided that the measures described in Section 2.3.1 are implemented.

4.16.1.7 Threatened and Endangered Species

The FAF site most likely provides foraging habitat for the Northern Pine Snake (State-Threatened), and other project locations (on and off base) in the area have had confirmed Northern Pine Snake sightings. Because the range for these snakes can be several miles and the numbers of snakes potentially affected is unknown, it is difficult to quantify the cumulative effects of these projects. However, even with proper construction management measures, the cumulative impact of these projects would likely include displacement or inadvertent harm to some snakes during their construction phases. These cumulative impacts would be offset to some degree by measures that preserve similar habitat and the creation of artificial hibernacula within those preservation areas.

4.16.1.8 Historic and Architectural Resources

The proposed FAF would not be located in an eligible LTA Historic District or an area of high archeological sensitivity. The FAF would be located within a limited sightline to Mat 3, Hangar 5, and Hangar 6 in the LTA District. Previous projects near the Mat 3 LTA District have slightly altered the visual setting of this area, including the Department of Justice hangar to the north of Hangar 5 and the Combined Structural/Airfield Fire Rescue Building near the intersection of Rounds and McCord Roads. The planned NJ Army National Guard Army Aviation Support Facility will be constructed in 2012 just south of Rounds Road near Mat 3 and would lie between the Proposed FAF and the LTA District. Therefore, the FAF, when added to the past and future projects in and around the LTA District, would not adversely affect the LTA District and would not create significant adverse effects on the setting or viewshed of historic and architectural resources.

4.16.1.9 Socioeconomics

The proposed FAF would result in minor, short-term positive impacts on jobs and the local economy during the construction phase. Other projects proposed for Lakehurst, such as the LEMV and RRATs would continue to use existing base workforce. Cumulatively, the other planned residential developments and the construction of the Super Wal-Mart would have the largest long-term positive impact in terms of jobs and demand for services in the region.

4.16.1.10 Environmental Justice

No cumulative environmental justice impacts would be anticipated as a result of the implementation of the proposed FAF in conjunction with proposed projects in the vicinity of the project study area. Neither Ocean County nor Jackson Township are comprised of a disproportionate percentage of minority and/or low-income populations compared to the State, and the Proposed Action does not involve the displacement or direct impact of any minority populations.

4.16.1.11 Infrastructure

The proposed FAF and other projects in the ROI would connect to the Ocean County Utilities Authority sewer and treatment systems. The expansion of the Sanitary Sewer Area proposed by the County to new areas (despite an overall net loss of acreage in the area) would also contribute to the amount of wastewater treated by the system. The Berkeley (Central Plant) facility has a rated capacity of 32 million gallons per day and in 2009 received 21.8 million gallons of flow (NJDEP, 2009). As the Central Plant still has another 30 percent of unused daily capacity, the cumulative impacts of the FAF and other projects in the area on the system would be minor. Assuming that another 100 personnel re-occupy Hangar 5 once the FAF is built and each worker generates 13 gallons of wastewater per day, and each new household in the ROI (approximately 1,060 households) generates 140 gallons per day, the combined

contribution to the Central Plant would be 0.15 million gallons per day or less than 0.7 percent of the current system influent.

The Northeast (including NJ) has access to supplies from several major domestic natural gas producing areas and from Canada. Domestic natural gas flows into the region from the Southeast into Virginia and West Virginia, and from the Midwest into West Virginia and Pennsylvania. Canadian imports come into the region principally through New York, Maine, and New Hampshire (EIA, 2011). Due to the abundance of natural gas supplies in the region, the cumulative impacts of the FAF and other construction projects in the ROI on gas supplies would be negligible.

4.16.1.12 Transportation and Traffic

The construction of the FAF would cause in minor, short-term adverse impacts on traffic as the number of truck deliveries and worker vehicles would increase slightly over a two year period. The other planned projects in the region of influence, including proposed residential developments and transportation improvement projects, would cumulatively result in adverse short-term impacts during the construction phase. Intersections most likely to experience cumulative traffic impacts from the projects in the Region of Influence include: Route 527/528; Route 547/528; Route 547/Route 571; Route 547/Route 70. Once the construction phases are over, the transportation improvement projects would increase road safety, while the residential developments would increase local traffic over the long-term.

4.16.1.13 Materials and Waste

The construction of the FAF would require standard building materials that are readily available from several suppliers in the region. However, depending on the timing of the construction of the FAF and other projects in the region, there may be minor, short-term impacts on availability of construction materials. Cumulatively, there would be several hundred acres of trees to be cleared for the FAF, LEMV airfield, RRATS antenna site, tree thinning and clearing projects on Lakehurst, Grawtown Estates, Miele Farms, and the Super Wal-Mart, resulting in moderate amounts of vegetation waste. The tree removal projects on Lakehurst would seek bids for the forest products removed in accordance with AFI 32-7064, increasing the potential for beneficial reuse. There may also be some competition for asphalt supplies between the FAF project and road construction projects in the area (CR 571 and Route 70).

4.16.1.14 Alternative 2 (No Action Alternative)

Under the No Action Alternative the CFA would not construct an FAF within the boundaries of JB MDL, and would therefore maintain their operations in Hangar 5. No cumulative environmental, socioeconomic or cultural resources impacts would be anticipated. Under the No Action Alternative, short-term adverse impacts could occur with regard to safety and infrastructure until Hangar 5 code violations are addressed. These potential adverse impacts would be localized to Hangar 5 personnel and infrastructure, with a low probability of resulting in any cumulative impacts with other projects and missions in the area.

Table 4-2. Past, Present, and Future Projects in the Region of Influence

Action	Location	Description	Timeframe	Resources Potentially Affected
On-Base				
Construction of the NJ Army National Guard Army Aviation Support Facility (AASF) on Mat 3.	JB MDL, Mat 3	The AASF is planned to begin construction in FY2013 on Mat 3 near Rounds road and would continue through the time period that the FAF would start construction. These two very large aviation complexes would access the sites along the same roads within JB MDL and construction vehicles would both utilize the commercial gate. This project would relocate existing Army Aviation personnel and assets from the Lakehurst/Maxfield Field Hangar.	Construction phase FY2013-2014	Air Quality, Traffic; Airspace; Infrastructure
New Modular Solar Panel Arrays	JB MDL, East of Hangar 1	Tentatively planned for the area east of Hangar 1, this project would establish up to 28 acres of modular solar panel units that would provide a supplemental power feed at Substation 1. Such a system, which would be provided by a firm licensed by the New Jersey Board of Public Utilities (NJ BPU) to serve as an electric generation provider, would enable the base to offset purchased coal-plant- and nuclear-plant-generated electrical power with a "green" source of power.	Unprogrammed, Construction Phase (estimated) 2013	Historic Properties, Forest Habitat, Energy
CERDEC Radio Receiving and Transmission Site (RRATs)	JB MDL, location unknown	CERDEC proposes to install and operate radio transmission equipment on 23 acres on the Lakehurst borrow site. The site would provide a fixed area for signals transmission to replace current use of mobile vans. The site would use the same frequencies and operate with existing staff. Aircraft receiving signals would fly off-shore; there would be no increase in air operations on JB MDL.	Construction FY2013; Operations FY2014	Airspace, Forest habitat; Infrastructure
Long-Endurance Multi-Intelligence Vehicle (LEMV)	JB MDL, Lakehurst	The US Army Research, Development, and Engineering Command has contracted with Northrop Grumman to construct and test a LEMV (airship) to provide a persistent surveillance and reconnaissance capability to support brigade combat teams. The first LEMV will be completed and flight- tested in Fall 2011 with another order for up to 2 additional aircraft underway. The LEMV is operating out of Hangar 6 at Lakehurst under a one-year agreement that ends in December 2011. An EA will begin in Summer 2011 to address the program's longer term facility and airfield needs.	Operations Ongoing and Potentially Expanding	Airspace, Historic Properties
C-17 Landing Zone Operations at Lakehurst/ Maxfield Field	JB MDL, Lakehurst/Maxfield Field	The U.S. Air Force began operating a C-17 Assault Landing Zone along side runway 24 in 2009. The numbers of C-17 air operations in 2010 was far below the program's annual goals, and it is likely that these operations would increase over time to meet their goals. Therefore, air operations at Lakehurst/Maxfield Field would increase, as well as noise levels, due to C-17 operations.	Operations Ongoing	Noise; Airspace

Action	Location	Description	Timeframe	Resources Potentially Affected
Joint Strike Fighter (JSF) Operational Testing at JB MDL	JB MDL, NAVAIR Test Runway and Tracks	The 2006 Final Environmental Assessment (EA)/Overseas EA, Joint Strike Fighter, System Development and Demonstration Developmental Test Program, identified and evaluated the potential effects from conducting test activities of three F-35 aircraft variants over a six year period at Department of Defense facilities and ranges uniquely equipped with assets to support tests and evaluations of military strike aircraft weapon systems. JB MDL Lakehurst was identified as an ancillary test location to conduct Jet Blast Deflector, Arresting Gear, Steam Catapult, and Barricade testing over a period of three years. Each test would last approximately 2-4 weeks. While proposed flights are minimal, the JSF would have a greater noise profile than existing Navy jets, resulting in very high levels of localized noise at the Test Runway during flights.	Intermittent through June 2015	Noise; Airspace
Forestry and Tree Clearing Projects on Lakehurst	JB MDL, Lakehurst	This project would conduct tree thinning to improve forest health and reduce fire hazard across 501 acres in the western portion of Lakehurst. There would also be 36 acres of tree removal near Maxfield Field to improve tower visibility to Mat 3 and provide training area to the AF Expeditionary Center.	Implementation FY2013	Forest Habitat; Air Traffic Safety
Off-Base, Land Use				
Legler Service Area Water System Improvements	Jackson Township, 3 miles north of Lakehurst/ Maxfield Field	This water main extension project is currently underway off-base along Bowman Road approximately 3 miles north of the Lakehurst/Maxfield Field Runways. This project will connect the Legler Water System with the Jackson Municipal Utility Authority Water System.	Construction ongoing through 2013	Water Resources, Land Use: Infrastructure
Sanitary Sewer Expansion in Ocean County	Ocean County	The Ocean County planning staff is working with municipalities, the Ocean County Utilities Authority and the NJ Department of Environmental Protection to delineate sewer service area boundaries in the County. This latest update to the Ocean County Wastewater Management Plan began in November of 2008 and is ongoing. The new NJDEP sewer service area boundaries do not affect Pinelands designated Regional Growth Areas, Towns, or Villages. In Ocean County, the proposed Sewer Service Area (SSA) would add areas to where new service is needed and remove areas where such service or sewer lines would conflict with wetland buffers, natural heritage priority sites, beaches, Pineland Management Areas, and coastal environmentally sensitive areas, with an anticipated net decrease of approximately 1,900 acres (7.8 percent decrease). Current plans for Manchester Township would remove several hundred acres of SSA adjacent to the base, particularly southeast of the Test area. Similarly, the plan for Jackson would remove several hundred acres of existing SSA.	Ongoing	Water Resources, Land Use; Infrastructure

Action	Location	Description	Timeframe	Resources Potentially Affected
Residential Development	Jackson Township	Grawtown Estates – This 493 single family home development on 304 acres will be located approximately 2.5 miles northeast of the proposed FAF. Miele Farms – Located approximately 2 miles northeast of the proposed FAF. The proposed development is along South Hope Chapel Road. The preliminary plans include 315 residential lots located on approximately 88 acres. The proposed development is within the Pinelands Preservation Area and was reviewed by the Jackson Township Planning Board on February 7, 2011.	Construction phase 2013	Land Use; Pinelands Habitat, (Northern Pine Snake), Forest removal, Off-Base Noise Receptors; Traffic; Infrastructure
	Manchester Township	River Pointe – Manchester New Jersey. Located between Route 547 and Ridgeway Road, this active adult community consists of single family homes and began construction in 2007. Due to the economic downturn, approximately half of the 504 approved homes have not been built to date (April 2011), but this additional development will continue over time.	Construction ongoing	Land Use; Off-Base Noise Receptors; Traffic; Infrastructure
Commercial Development	Route 37, Toms River	A proposed Super Wal-Mart is planned near the intersection of Route 37 and Northampton Boulevard in Toms River NJ, approximately 4 miles from the JB MDL Lakehurst Main Gate. The store would be built on 17 acres with another 212 acres near the site permanently preserved for Northern Pine Snake (State-Threatened) habitat and construction of five dens on that site (Manchester Times, 2011).	Construction phase 2013-2014	Land Use; Traffic; Northern Pine Snake Habitat; Infrastructure
Off-Base, Transportation				
Transportation projects in Ocean and Burlington County	Ocean County, Various	Three projects are planned between 2011 and 2013 along commuting routes within 10 miles of the Lakehurst main gates that could affect commuter traffic if they occur in the FY 2013 timeframe (NJTPA, 2011). • Pavement rehabilitation on Route 70 from East of North Branch Road to CR 539. This project will provide milling and asphalt overlay for approximately 7 miles through Pemberton and Manchester Townships. • Reconstruction of the bridge near Rova Farms, Cassville Road. • Realignment of County Route 571 at Francis Mills, Jackson Township. This project would provide safety improvements from 500 feet north of Leesville Road to 500 feet south of Reed Road (approximately 1 mile). It would remedy the two reverse curves in the road and replace the existing obsolete bridge in that area. It will provide two 12-foot travel lands and two 10-foot shoulders.	Construction phase 2011 - 2013	Traffic

Action	Location	Description	Timeframe	Resources Potentially Affected
Acquisition of land adjacent to JB MDL for open space	Jackson Township	Ocean County purchased 10 acres along the Ridgeway Branch adjacent to JB MDL in January 2011 with DoD assistance. JB MDL inegotiated an easement and fee simple purchase of the Clayton Sand Mine property located 0.5 miles north of Lakehurst/Maxfield Field. Approximately 380 acres was purchased for expansion of Patriot's Park on Bowman Road. The remaining 1,400 acres contain an easement where future land use would remain industrial or commercial in accordance with land uses approved for runway accident potential zones.	FY 2012	Land Use; Off-Base Noise Receptors; Pinelands Habitat
Off-Base, Airspace				
Robert Miller Airpark	Berkeley, NJ	The Robert Miller Airpark is located approximately 10 miles southeast of the Lakehurst/Maxfield Field runways on Route 530 in Berkeley NJ. The Airpark is undergoing extensive improvements including a new crosswind runway (14-32) (the first runway built in NJ in 20 years), a new terminal, runway widening, a new hangar, a new fuel farm and other improvements. These improvements will increase the capacity of the airpark.	Construction phase 2013-2015; Operations ongoing	Airspace
C-17 Operations at Stewart International Airport and Martinsburg ANGB	New York and West Virginia, East Coast Airspace	As the Air Force plans to retire 22 of its oldest C-5s in FY2011, they will begin to be replaced with C-17s. The 105th Airlift Wing out of the New York Air National Guard, Stewart International Airport in Newburgh New York will be replacing its fleet of 13 C-5s with C-17s, requiring an additional 1,620 short-field landing operations at the JB MDL Maxfield Field when compared to the number established in the Environmental Assessment, East Coast Basing of C-17 Aircraft. Similarly, the 167th Airlift Wing at Eastern West Virginia Regional Airport in Martinsburg would bed down 8 C-17s, requiring an additional 1,620 training operations per year at Maxfield. This would increase the number of landing zone operations at Maxfield by 3,240 per year.	Began in 2012	Airspace

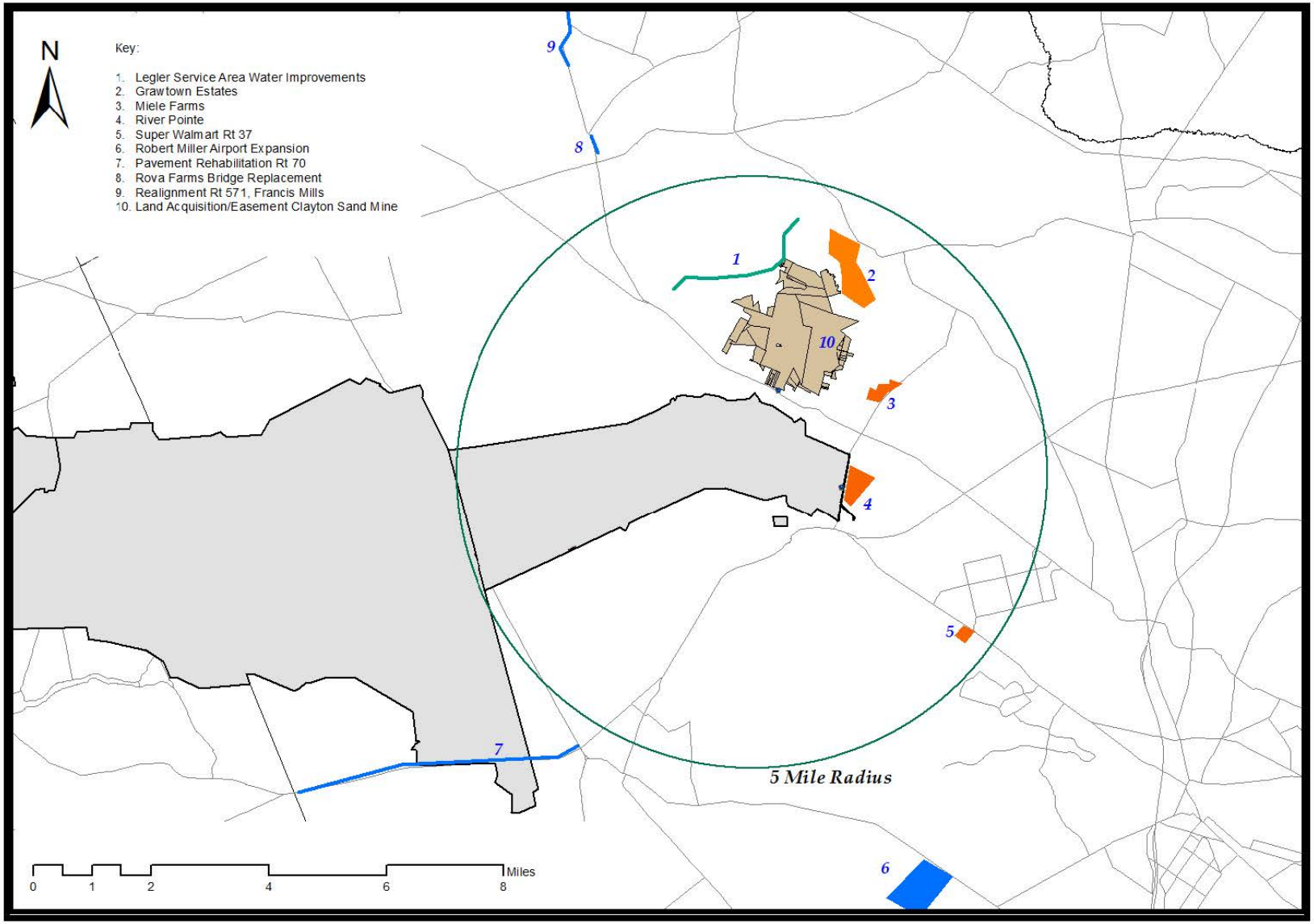

Figure 4-4. Locations of Projects Planned and Ongoing in the Region of Influence

4.17 Irreversible and Irretrievable Commitment of Resources

An irreversible commitment of resources is defined as the loss of future options. The term applies primarily to the effects of use of nonrenewable resources such as minerals or cultural resources, or to those factors such as soil productivity that are renewable only over long periods. It could also apply to the loss of an experience as an indirect effect of a "permanent" change in the nature or characters of the lands. An irretrievable commitment of resources is defined as the loss of production, harvest, or use of natural resources. The amount of production foregone is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume production.

The Proposed Action would not have irreversible impacts because different future uses of the land are still possible. A future decommissioning process could restore the site for alternative uses. The location of the proposed FAF is consistent with the surrounding aviation-related uses and would not adversely affect surrounding land uses.

The primary irretrievable impacts of the Proposed Action would involve the use of energy, labor, material, funds, and the commitment of land for the construction of the facility. Irretrievable impacts would occur as a result of construction and facility operations.

4.18 The Relationship Between Local Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity

The Proposed Action would commit resources in the form of energy, labor, materials, and funds for the foreseeable future. The justification for these commitments at this time is described in Chapter 1, Purpose and Need for the Proposed Action. Long-term productivity associated with the Proposed Action includes the ability of the CFA to develop and test new or improved communications systems and technologies for the warfighter. These technologies would contribute to more efficient warfighting capabilities, with the aim of reducing human and material losses associated with prolonged or inefficient engagements with the enemy.

4.19 Unavoidable Adverse Impacts

The Proposed Action would require removal of 37 acres of forest. This would remove 37 acres of forested habitat for forest birds, mammals, and foraging habitat for the Northern Pine Snake. During construction there would unavoidable, although temporary, increase in construction-related noise and air pollutant emissions at the site. There would be increased truck traffic to and from the site to deliver construction equipment and materials. The proposed FAF would consume materials for its construction and consume minor amounts of natural gas, potable water, and electricity for its operations.

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5. COMPARISON OF ALTERNATIVES AND CONCLUSIONS

As a result of the implementation of Alternative 1 (Construct a new FAF on Parcel 22), the following impacts would be anticipated:

- Minor, short-term adverse air quality impacts due to increased mobile emissions and fugitive dust during construction.
- Minor, short-term adverse noise impacts due to construction-related activities and associated equipment.
- Minor, short-term adverse impacts to geology, topography, and soils due to potential soil erosion during construction.
- Minor, long-term adverse impacts to biological resources due to loss of habitat and the displacement of wildlife.
- Minor, short-term positive socioeconomic impacts due to the utilization of regional contractors associated with the construction of the proposed FAF.
- Minor, short-term safety hazards associated with the low potential to encounter UXO on Parcel 22. Long-term positive safety improvements due to a fully code-compliant FAF with adequate fire protection features.

Based on the analysis presented in this EA, Alternative 1 is the Preferred Alternative for the Proposed Action. Alternative 1 was found to satisfy the purpose and need for the Proposed Action; The No Action Alternative could continue to support CFA activities, although it would not satisfy the need to provide safe, code-compliant facilities in the near term.

The evaluation performed within the EA concludes that, with the adherence to construction requirements in Section 2.3.1 and the sustainable design and construction best management practices described in Section 2.3.2, no significant impact to the physical environment; surface water; groundwater; air quality; biological resources; land use; socioeconomic environment; noise; materials and waste; cultural resources; infrastructure; human health and safety; and environmental justice would be anticipated as a result of the implementation of the Preferred Alternative (see Table 5-1).

This analysis determines that an Environmental Impact Statement (EIS) is not necessary for the implementation of Alternative 1 and that a FONSI is appropriate.

Table 5-1. Summary of Impacts

Resource Area	Alternative 1 Parcel 22	Alternative 2 No Action Alternative
Land Use	○	○
Airspace	○	○
Air Quality	■	○
Noise	●	○
Geology, Topography, and Soils	■	○
Water Resources	●	○
Biological Resources	●	○
Cultural Resources	○	○
Socioeconomics	▣	○
Environmental Justice	○	○
Infrastructure	†	◨ [1]
Transportation and Traffic	○	○
Materials and Waste	■	○
Safety	■	◨ [1]

Note 1: Until repairs are made to Hangar 5 to achieve present day code compliance, short-term adverse effects could occur due to building code issues and safety hazards.

Key to Symbols

Significant Adverse Impact	Minor Adverse Impact	No Impact	Minor Positive Impact	Significant Positive Impact
Long-Term Impact				
◑	●	○	◉	†
Short-Term Impact				
◨	■	□	▣	‡

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Mr. Brian Taboada, Senior GIS Specialist.

9. INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING LETTERS MAILING LIST

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New Jersey Field Office, Ecological Services
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APPENDIX A

INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING

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Summary of Agency Correspondence Received

Date	Agency	Description
5-18-2011	NJDEP, Division of Parks and Forestry	Letter providing results of Natural Heritage Database and the Landscape Project habitat mapping for the site.
5-18-2011	Ocean County Soil Conservation District	Response to interagency coordination letter that provides a copy of a site plan application packet for soil erosion and sediment control.
5-24-2011	US Department of Interior, Fish and Wildlife Service, NJ Field Office	Comments on proposed action with regard to Federally-listed species, migratory birds, State-listed species, and other species of concern.
5-31-2011	NJDEP, Historic Preservation Office	Comments on the proposed action with regard to the indirect effects on the LTA District, concern about the deteriorating condition of Hangar 5, and low potential for the proposed FAF site to contain National Register of Historic Places eligible archeological resources.
7-7-2011	NJDEP, Office of Permit Coordination and Environmental Review	Response to interagency coordination with regard to applicable permitting.

Summary of Correspondence Sent

Pinelands Commission National Defense Exemption Letter

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Parks and Forestry
Mail Code 501-04
ONLM -Natural Heritage Program
P.O. Box 420
Trenton, NJ 08625-0420
Tel. #609-984-1339
Fax. #609-984-1427

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

May 18, 2011

Dorothy Peterson, P.E.
EHS Technologies
Joint Base McGuire Dix Lakehurst, Building 5
Lakehurst, NJ 08733

Re: CERDEC Flight Activity Facility Environmental Assessment

Dear Ms. Peterson:

Thank you for your data request regarding rare species information for the above referenced project site in Jackson Township, Ocean County.

Searches of the Natural Heritage Database and the Landscape Project (Version 3 for the highlands region, Version 2.1 elsewhere) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Request for Data into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Natural Heritage Database and the Landscape Project habitat mapping for occurrences of any rare wildlife species or wildlife habitat on the referenced site. Please see Table 1 for species list and conservation status.

Table 1 (on referenced site).

Common Name	Scientific Name	Federal Status	State Status	Grank	Srank
dotted skipper	*Hesperia attalus slossonae*			G3G4T3	S3
grasshopper sparrow	*Ammodramus savannarum*		T/SC	G5	S2B,S3N
great blue heron	*Ardea herodias*		SC/S	G5	S3B,S4N
northern pine snake	*Pituophis melanoleucus melanoleucus*		T	G4T4	S2
upland sandpiper	*Bartramia longicauda*		E	G5	S1B,S1N

We have also checked the Natural Heritage Database and the Landscape Project habitat mapping for occurrences of any rare wildlife species or wildlife habitat within 1/4 mile of the referenced site. Please see Table 2 for species list and conservation status. This table excludes any species listed in Table 1.

Table 2 (additional species within 1/4 mile of referenced site).

Common Name	Scientific Name	Federal Status	State Status	Grank	Srank
barred owl	*Strix varia*		T/T	G5	S2B,S2N
black-billed cuckoo	*Coccyzus erythropthalmus*		SC/S	G5	S3B
blackburnian warbler	*Dendroica fusca*			G5	S2B
black-throated green warbler	*Dendroica virens*		S/S	G5	S3B
brown thrasher	*Toxostoma rufum*		SC/S	G5	S3B,S4N
cerulean warbler	*Dendroica cerulea*		S/S	G4	S3B,S3N
common nighthawk	*Chordeiles minor*		SC/SC	G5	S3B,S3N
Cooper's hawk	*Accipiter cooperii*		T/S	G5	S2B,S4N
eastern box turtle	*Terrapene carolina carolina*		SC	G5T5	S3
eastern king snake	*Lampropeltis g. getula*		U	G5T5	S3
least flycatcher	*Empidonax minimus*		S/S	G5	S3B
pine barrens treefrog	*Hyla andersonii*		T	G4	S2
red-shouldered hawk	*Buteo lineatus*		E/T	G5	S1B,S2N
whip-poor-will	*Caprimulgus vociferus*			G5	S4B
wood thrush	*Hylocichla mustelina*		SC/S	G5	S3B
worm-eating warbler	*Helmitheros vermivorus*		S/S	G5	S3B

We have also checked the Natural Heritage Database for occurrences of rare plant species or ecological communities. The Natural Heritage Database does not have any records for rare plants or ecological communities on or within 1/4 mile of the site.

A list of rare plant species and ecological communities that have been documented from Ocean County can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2008.pdf.

If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive I-Map-NJ website at the following URL, http://www.state.nj.us/dep/gis/depsplash.htm or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292 9400.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Robert J. Cartica
Administrator

c: NHP File No. 11-4007413-7370

New Jersey Natural Resources Conservation Program

OCEAN COUNTY SOIL CONSERVATION DISTRICT

714 Lacey Road, Forked River, NJ 08731
Tel 609.971.7002 · Fax 609.971.3391 · www.ocscd.org

05-18-2011

Dorothy Peterson
EHS Technologies
1221 N. Church Street, Unit 106
Moorestown NJ 08057

Re: Proposed Army Communicatio9ns-Electronis Research, Development and Engineering Command, Flight Activity Facility, at the Joint Base McGuire-Dix-Lakehurst (JBMDL);
Borough of Lakehurst

In response to your recent inquire be advised that in accordance with State of New Jersey Soil Erosion and Sediment Control Act Chapter 251, P.L. 1975, any project that disturbs 5000 square feet of surface/soil area is required to submit an application for review, approval and certification.

For your convenience please find enclosed a site plan application packet.

In addition, any project with a minimum disturbance one (1) acre shall be required to submit application to NJDEP, Bureau of Nonpoint Pollution Control, to receive an Authorization to Discharge (ATD) under the NJPDES Stormwater General Permit.

If you have any questions, or require any assistance please do not hesitate to contact me.

Sincerely,

Chuck Collins CPESC
Resource Conservationist

New Jersey Natural Resources Conservation Program

OCEAN COUNTY SOIL CONSERVATION DISTRICT

714 Lacey Road, Forked River, NJ 08731
Tel 609.971.7002 · Fax 609.971.3391 · www.ocscd.org

SITE PLAN APPLICATION PACKET

Per your request, we have enclosed the following:

1. Application for Soil Erosion & Sedimentation Control (SESC) Plan Certification
2. Ownership Disclosure Affidavit
3. General Notes
4. Chapter 251 Fee Schedule
5. Instructions for direct filing of the NJDEP Request for Authorization Application (RFA), if required, are attached hereto.

The SESC fee, according to the Chapter 251 Fee Schedule, is to be made payable to: Ocean County Soil Conservation District or O.C.S.C.D.

CHECKS MUST NOT BE MORE THAN 60 DAYS OLD.

All completed forms, fees and required additional items are to be submitted to the Ocean County Soil Conservation District Office.

All applications must be signed by the project owner.

CERTIFICATION LETTER AND CERTIFIED PLANS ARE MAILED TO THE PROJECT OWNER'S ADDRESS. PLEASE INDICATE IF THEY ARE TO BE MAILED TO A DIFFERENT ADDRESS.

Revised 9/30/09

NJ DEPARTMENT OF AGRICULTURE, NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION, COOK COLLEGE OF RUTGERS UNIVERSITY, AND UNITED STATES NATURAL RESOURCES CONSERVATION SERVICE, COOPERATING

New Jersey Natural Resources Conservation Program

For District Use Only
Application Number

APPLICATION FOR SOIL EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION

The enclosed soil erosion and sediment control plan and supporting information are submitted for certification pursuant to the Soil Erosion and Sediment Control Act, Chapter 251, P.L. 1975 as amended (NJSA 4:24-39 et. seq.) An application for certification of a soil erosion and sediment control plan shall include the items listed on the reverse side of this form.

Name of Project		Project Location: Municipality	
Project Street Address		Block	Lot
Project Owner(s) Name			Phone # Fax #
Project Owner(s) Street Address (No P.O. Box Numbers)		City	State Zip
Total Area of Project (Acres)	Total Area or Land to be Disturbed (Acres)	No. Dwelling or other Units	Fee $
Plans Prepared by*			Phone # Fax #
Street Address		City	State Zip

Engineering related items of the Soil Erosion and Sediment Control Plan MUST be prepared by or under the direction of and be sealed by a Professional Engineer or Architect licensed in the State of New Jersey, in accordance with NJAC 13:27-6.1 et. seq.)

Agent Responsible During Construction			
Street Address			
City	State Zip	Phone	Fax #

The applicant hereby certifies that all soil erosion and sediment control measures are designed in accordance with current **Standards for Soil Erosion and Sediment Control In New Jersey** and will be installed in accordance with those Standards and the plan as approved by the Soil Conservation District and agrees as follows:

1. To notify the District in writing at least 48 hours in advance of any land disturbance activity. Failure to provide such notification may result in additional inspection fees.
2. To notify the District upon completion of the Project (Note: No certificate of occupancy can be granted until a report of compliance is issued by the District.
3. To maintain a copy of the certified plan on the project site during construction.
4. To allow District agents to go upon project lands for inspection.
5. That any conveyance of this project or portion thereof prior to its completion will transfer full responsibility for compliance with the certified plan to any subsequent owners.
6. To comply with all terms and conditions of this application and certified plan including payment of all fees prescribed by the district fee schedule hereby incorporated by reference.

The applicant hereby acknowledges that structural measures contained in the Soil Erosion and Sediment Control Plan are reviewed for adequacy to reduce offsite soil erosion and sedimentation and not for adequacy of structural design. The applicant shall retain full responsibility for any damages which may result from any construction activity notwithstanding district certification of the subject soil erosion and sediment control plan. It is understood that approval of the plan submitted with this application shall be valid only for the duration of the initial project approval granted by the municipality. All municipal renewals of this project will require submission and approval by the district. In no case shall the approval extend beyond three and one half years at which time resubmission and certification will be required. Soil Erosion and Sediment Control Plan certification is limited to the controls specified in the plan. It is not authorization to engage in the proposed land use unless such use has been previously approved by the municipality or other controlling agency.

1. Applicant Certification* Signature Date Applicant Name (Print)	3. Plan determined complete: Signature of District Official Date
2. Receipt of fee, plan and supporting documents is hereby acknowledged: Signature of District Official Date	4. Plan certified, denied or other actions noted above. Special Remarks: Signature of District Official Date

*If other than project owner, written authorization of owner must be attached.

SSCC251 AP10 4/99

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office
Ecological Services
927 North Main Street, Building D
Pleasantville, New Jersey 08232
Tel: 609/646 9310
Fax: 609/646 0352
http://www.fws.gov/northeast/njfieldoffice

In Reply Refer To:
11-CPA-0196

MAY 24 2011

Dorothy Peterson, Project Manager
EHS Technologies
Joint Base McGuire-Dix-Lakehurst
Highway 547, Building 5
Lakehurst, New Jersey 08733

Dear Ms. Peterson:

The U.S. Fish and Wildlife Service (Service), New Jersey Field Office has reviewed your letter dated May 13, 2011 regarding the environmental planning for preparation of an *Environmental Assessment for the proposed Army Communications-Electronics Research, Development and Engineering Command, Flight Activity Facility at the Joint Base McGuire-Dix-Lakehurst, Jackson Township, Ocean County New Jersey* (EA). The Flight Activity Facility is proposed to be constructed near the approach end of Runway 24.

AUTHORITY

The following comments on the proposed action are provided pursuant to Section 7 of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) and the Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755; 16 U.S.C. 703-712), as amended, to ensure the protection of federally listed endangered and threatened species, and migratory birds. Additional comments are provided as technical assistance in preparation of a draft EA and do not preclude further comment pursuant to the National Environmental Policy Act (83 Stat. 852; 42 U.S.C. 4321 *et seq.*) (NEPA).

FEDERALLY LISTED SPECIES

Knieskern's Beaked-rush

There is an historical occurrence of the federally listed (threatened) plant Knieskern's beaked-rush (*Rhynchospora knieskernii*) in the vicinity of the project site. The Service concurs that the project is not likely to adversely affect Knieskern's beaked-rush.

Bog Turtle

There is known habitat of the federally listed (threatened) bog turtle (*Clemmys muhlenbergii*) located within 0.6 miles of the project site. However, the proposed project site is no longer hydrologically connected to the bog turtle habitat because of helicopter landing areas, roads, and other developments. Therefore, the Service concurs that the project as proposed is not likely to adversely affect the bog turtle.

Other Federally Listed Species

No federally listed or proposed threatened or endangered flora or fauna under Service jurisdiction are known to occur within the vicinity of the proposed project site. Therefore, no further consultation pursuant to Section 7 of the Endangered Species Act is required by the Service. If additional information on federally listed species becomes available, or if project plans change, this determination may be reconsidered.

MIGRATORY BIRDS

The Service has reviewed the EA and has determined that removal of forest within the 30-acre site will have an adverse impact on migratory birds if conducted during the nesting season (destruction of nests with eggs or unfledged birds). The Breeding Bird Atlas (Niles *et al.*, 2001) lists 71 species of breeding migratory birds that occur in the vicinity of the proposed project site. The Service requests a seasonal restriction on tree cutting between March 15 and July 31 to avoid impacts to birds protected under the MBTA. Pursuant to Section 704(a) of the MBTA, the Armed Forces are exempted for the incidental taking of migratory birds during military readiness activities authorized by the Secretary of Defense; however, this seasonal restriction was implemented for completion of previous projects (*e.g.*, Fort Dix Military Construction Projects, Joint Improvised Explosive Device Defeat Organization Training Facility). We request that you implement the seasonal restriction on tree cuttingd.

STATE-LISTED SPECIES AND OTHER SPECIES OF CONCERN

Occurrences of the State-listed northern pine snake (*Pituophis melanoleucus melanoleucus*) have been documented in the vicinity of the project site. This species is secretive and, as a result, it might be difficult to document its presence. Major threats to the northern pine snake are habitat loss and alteration. State-listed species are protected under the State's Endangered and Nongame Species Conservation Act (N.J.S.A. 23:2A *et seq.*). The Service recommends contacting the State Endangered and Nongame Species Program for specific measures to avoid adverse impacts to the northern pine snake.

Species of concern near the proposed project site are the great blue heron (*Ardea herodias*) and sickle-leaf golden-aster (*Pityopsis falcata*).

Thank you for the opportunity to comment on the environmental planning phase for the subject EA. Please contact Carlo Popolizio at (609) 383-3938, extension 32, if you require further assistance.

Sincerely,

J. Eric Davis Jr.
Field Supervisor

REFERENCE

Niles, L.J., M. Valent, J. Tash and J. Myers. 2001. New Jersey's Landscape Project: Wildlife habitat mapping for community land-use planning and endangered species conservation. New Jersey Department of Environmental Protection, New Jersey Division of Fish and Wildlife, Endangered and Nongame Species Program.

HPO Project# 11-1143-1
HPO-E2011-253

State of New Jersey

MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
PO Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

May 31, 2011

Ms. Dorothy Peterson, P.E.
Project Manager, EHS Technologies
Joint Base McGuire-Dix-Lakehurst
Highway 547, Building 5
Lakehurst, NJ 08733

Re: Joint Base McGuire-Dix-Lakehurst
Communications, Electronics Research, Development & Engineering Command
Proposed Flight Activity Facility (FAF)
HPO Project # 11-1143

Dear Ms. Peterson:

The Historic Preservation Office (HPO) is in receipt of your May 16, 2011 letter regarding the above-referenced proposed undertaking. Joint Base McGuire-Dix-Lakehurst is currently identifying environmental resources, issues, and constraints associated with the project area in order to assess potential environmental impacts associated with the construction and operation of the Flight Activity Facility (FAF). This information will be incorporated into the Environmental Assessment (EA) document, currently being developed in accordance with the National Environmental Policy Act (NEPA). Please note that this federal undertaking will also be subject to consultation pursuant to Section 106 of the National Historic Preservation Act.

The proposed FAF will provide high and low aircraft hangar bays, maintenance and fabrication shops, storage areas, office/meeting space, an airfield apron area, helicopter landing area, and new taxiway to access the Westfield 06/24 runway.

One previously identified historic architectural resource, the Lighter-Than-Air Historic District, is located in the vicinity of the proposed FAF. The historic district was determined eligible for listing in the New Jersey and National Registers of Historic Places on June 27, 1995. As delineated in the submitted documentation, the proposed FAF is outside the boundary of the Lighter-Than-Air Historic District, a portion of which is located to the south of Rounds Road (incorporating Mat 3, Hangar 5, Hanger 6 and surrounding support structures). However, because of its close proximity, any indirect

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effects upon this portion of the historic district that will result from the proposed undertaking must be considered during project design.

The submitted letter states that the operations that will be moved to the new facility are currently housed in Hangar 5 (a contributing structure within the Lighter-Than-Air Historic District) and that one of the reasons for the construction of the new facility is to provide efficient, adequate, and safe facilities as Hangar 5 has significant structural and building code deficiencies that have created an unsafe work condition. HPO staff is concerned about the deteriorating condition of this important historic building and the potential effects resulting from the primary tenant vacating the building. HPO staff looks forward to further consultation with Joint Base regarding this matter.

An HPO staff archaeologist has reviewed the submitted documentation and determined that the location of the proposed Flight Activity Center has a low potential to contain National Register of Historic Places eligible archaeological resources. Unless there is a change in the project scope or location, no further survey work to identify archaeological resources is required.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. Please do not hesitate to contact Jonathan Kinney of my staff at (609) 984-0141 with any questions regarding historic architecture or Vincent Maresca at (609) 633-2395 with any questions regarding archaeology. If additional consultation with the HPO is needed for this undertaking, please reference the HPO project number 11-1143-1 in any future calls, emails, or written correspondence in order to expedite our review and response.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc:

Adrienne Duryee, Joint Base McGuire-Dix-Lakehurst
Ruth Foster, NJDEP Office of Permit Coordination

State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF PERMIT COORDINATION AND ENVIRONMENTAL REVIEW
P.O. Box 420 Mail Code 401-07J Trenton, New Jersey 08625-0420
Telephone Number (609) 292-3600
FAX NUMBER (609) 633-2102

BOB MARTIN
Commissioner

July 7, 2011

Ms. Dorothy Peterson
Project Manager
EHS Technologies
Joint Base McGuire-Dix-Lakehurst
Highway 547, Building 5
Lakehurst, NJ 08733

RE: Army Communications-Electronic Research, Development and Engineering Command
Proposed Flight Activity Facility at Joint Base McGuire-Dix-Lakehurst

EA Scoping Comments

Dear Ms. Peterson:

The New Jersey Department of Environmental Protection's (Department) Office of Permit Coordination and Environmental Review (PCER) distributed, for review and comment, your letter requesting scoping comments on the proposed Environmental Assessment (EA) for the Army Communications-Electronic Research, Development and Engineering Command proposed Flight Activity Facility at Joint Base McGuire-Dix-Lakehurst. On behalf of the Department, we offer the following comments for your consideration.

The Department's Division of Land Use Regulation offers the following remarks:

Freshwater Wetlands – None appear to be mapped with the proposed site, but complete absence of wetlands should be field verified.

Flood Hazard Area Control Act – No mapped regulated drainage features occur within or near the proposed site. This also should be verified.

Coastal Permitting – No coastal permitting is applicable, the Coastal Area Facility Review Act (CAFRA) Zone is about 11,000 feet southeast of the proposed site.

Thank you for giving the New Jersey Department of Environmental Protection the opportunity to provide scoping comments on the EA for the proposed project. Once the EA is completed, please send a paper copy and an electronic copy of the document directly to the Office of Permit Coordination and Environmental Review to ensure a timely, comprehensive departmental review.

Sincerely,

Scott Brubaker

Scott Brubaker, Director
Office of Permit Coordination
and Environmental Review

C: Ryan Anderson, Land Use

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND
JOINT BASE MCGUIRE-DIX-LAKEHURST

RECEIVED
SEP 27 2011

SEP - 8 2011

Colonel John M. Wood
JB MDL/CC
2901 Falcon Lane, Suite 100
Joint Base McGuire-Dix-Lakehurst NJ 08641

Nancy Wittenberg
Executive Director
NJ Pinelands Commission
Post Office Box 359
New Lisbon NJ 08064

Re: Construction of Army Flight Activity Facility at Joint Base McGuire-Dix-Lakehurst (JB MDL), Lakehurst Area

Dear Ms. Wittenberg

The Army plans to construct and operate a new Flight Activity Facility on JB MDL. The facility will improve the efficiency of research and development activities that will significantly advance emerging technology in the area of information warfare and intelligence systems.

Based on the operational requirements to complete construction of this facility for our service men and women in a timely manner, the Air Force has determined that an application to the Pinelands Commission for approval of this project would be incompatible with the national defense requirements. In accordance with N.J.A.C. 7:50-4.52(d), this project is mission critical for national defense and the Pinelands Commission review of this project is hereby waived.

Although an application for the Pinelands Commission will not be submitted, an Ocean County Soil Erosion and Sediment Control Plan will be submitted to the Soil Conservation District. Please contact Mr. Joseph Schwartz, 87 CES/CEAN at (609) 562-2216 for any additional information regarding this project.

Sincerely

JOHN M. WOOD, Colonel, USAF
Commander

cc:
87 CES/CD
87 CES/CEAN
87 ABW/JAV

APPENDIX B

CONFORMITY RULE COMPLIANCE
RECORD OF NON-APPLICABILITY

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Conformity Rule Compliance
Record of Non-Applicability

Project/Action Name: **Construction and Operation CERDEC Flight Activity Facility (FAF) at the Joint Base McGuire-Dix-Lakehurst (JB MDL)**

Project/Action POC: **Mr. Charles V. Maraldo, Jr., Director CERDEC Flight Activity, Building 194 JB MDL, Lakehurst NJ 08733, Tel (732) 323-2141**

Action Duration: **Permanent**

Conformity under Clean Air Act, Section 176, has been evaluated for the above-described project per 40 CFR Part 51. The requirements of this rule are not applicable to this action because:

Total direct and indirect emissions increases from the Proposed Action have been estimated at:

Alternative 1 (Preferred Alternative)
Annual Recurring Emissions

- 0.08 tons per year (tpy) of Volatile Organic Chemicals (VOCs); and
- 1.43 tpy of Oxides of Nitrogen (NOx).

One time Construction Emissions

- 1.43 tons VOCs; and
- 7.07 tons of NOx.

Alternative 2 (No Action Alternative)
This alternative was not evaluated because there would be no change in air emissions compared to the current operating scenario.

The emission increases from the Proposed Action would be below *de minimis* levels and regionally significant thresholds. The proposed CERDEC FAF emissions when are added to current Lakehurst emissions for VOCs and NOx would not exceed the Lakehurst SIP budget.

The supporting documentation and emissions estimates are attached.

Prepared by:

Dorothy S. Peterson, P.E.
Senior Environmental Engineer
EHS Technologies, Inc.

RECORD OF NON-APPLICABILITY (RONA) SUPPORTING DOCUMENTATION

Proposed Construction and Operation of a CERDEC Flight Activity Facility at Lakehurst/Maxfield Field, Joint Base McGuire-Dix-Lakehurst

1.0 Summary Description of the Proposed Action (Alternative 1)

The following provides a summary of the more detailed information presented in the Environmental Assessment (EA) prepared for the Proposed Action. Under the Preferred Alternative (Alternative 1), the CFA proposes the construction and operation of a FAF at the Joint Base McGuire-Dix-Lakehurst (JB MDL) Lakehurst adjacent to Jackson Township, NJ. The proposed FAF would allow a dedicated CERDEC facility at JB MDL.

The proposed FAF would include hangar bays, storage, shops, administration space, locker/shower areas, unheated storage areas, and other ancillary support spaces; in addition to, parking areas, spots, aprons, and other miscellaneous site features.

2.0 Overview of Considered Project Alternatives

The referenced EA considers two alternatives:

- **Alternative 1: Parcel 22 Alternative** – Construction of an FAF within Parcel 22 (a 38-acre parcel) located within JB MDL. A more detailed description of Alternative 1 is provided in Section 2.3 of the referenced EA.
- **Alternative 2: No Action Alternative** – Continued CFA operations in Hangar 5 at JB MDL. A more detailed description of Alternative 2 is provided in Section 2.4 of the referenced EA.

3.0 Purpose of the Record of Non-Applicability

In compliance with the General Conformity Rule (40 CFR Part 51, Subpart W) and the National Environmental Policy Act (NEPA; 42 USC 4321 *et seq.*), a Record of Non-Applicability be prepared in cases where the proposed increases in emissions are clearly *de minimis* or regionally insignificant.

The proposed FAF would be located in Ocean County, NJ, which is a designated moderate non-attainment area for ozone according to the National Ambient Air Quality Standards (NAAQS) and EPA's green book.

de minimis is defined as "so small or minimal in difference that it does not matter or the law does not take it into consideration".

Atmospheric ozone occurs when nitrogen oxides (NOx), carbon monoxide (CO) and volatile organic compounds (VOCs) react in the atmosphere in the presence of sunlight, a photochemical reaction. NOx and VOCs are called ozone precursors. Motor vehicle exhaust,

industrial emissions, and chemical solvents are the major anthropogenic sources of these chemicals. Although these precursors often originate in urban areas, winds can carry NOx hundreds of kilometers, causing ozone formation to occur in less populated regions as well.

Therefore, VOCs and NOx emissions are regulated as a means of controlling ozone production. Ocean County is in attainment with the NAAQS for all other criteria pollutants.

Ocean County is located in the Southern NJ/Philadelphia moderate non-attainment area for 8-hour ozone NAAQS. As specified in the conformity requirements of 40 CFR 51.853/93.153 standard in an ozone transport region is 100 tpy for NOx and 50 tpy for VOCs. The emissions inventory for the NJ portion of the non-attainment area is 94,243 tpy for VOC (258.2 tons per day) and 74,535 tpy (204.4 tons per day) for NOx (NJDEP, 2007). The regionally significant threshold for new actions would be 10 percent of those levels, or 9,424 tpy of VOC or 7,453 tpy of VOC. However, Lakehurst has a SIP emission budget of 129 tpy of VOC and 793 tpy of NOx.

4.0 Methodology

This applicability analysis evaluates all stationary and mobile sources of VOCs and NOx emitted both during construction and operation of the proposed facility in excess of their current operating levels.

The Proposed Action would increase VOCs and NOx emissions due to construction and operation emissions. Sources would include: use of heavy construction equipment; transport of materials; other construction emissions including worker vehicles; a new natural gas boiler to provide heat for the building; and a diesel generator.

The 2010 Draft Charrette for the proposed FAF was the basis for assumptions regarding facility size and features (Army CERDEC, 2010). However, the design is still at a largely conceptual phase, so some assumptions regarding the size and type of facility equipment were estimated based on projects of similar or larger sizes, such as the NJ Army National Guard Army Aviation Support Facility (AASF) that will begin construction in 2012 near Lakehurst/Maxfield Field. Where available, emission factors were obtained from government agency sources including the USEPA and US Department of Energy.

5.0 Construction Emissions

There would be a one-time direct emission increase for Alternative 1 due to the construction of the proposed FAF, based on estimated the construction equipment usage.

For the FAF, the following estimated worker numbers and time durations were assumed:

- Mobilization: Setting up a trailer and temporary office, with necessary site clearing and initial site survey. It would take 5 work-days with 8 workers, including the survey crew.
- Site Preparation: Clearing and grading approximately 40 acres of land. Includes tree removal with all material removed from the site. It would take 30 work-days with 6 workers.

- Site/Civil Construction: Construction of new utility lines to serve the site, paving of an entrance access, the aircraft parking apron and POV parking lot. It would take 40 work-days with 15 workers.
- Building Construction: Construction of the new FAF, including excavation, foundations, building frame, concrete, plumbing, HVAC, electrical, fire protection system, and exterior and interior finishes. It would take approximately 400 work-days over a two year period using an average of 40 workers each day. However, actual heavy construction equipment usage hours are estimated to be a total of 100 days within the first construction year.

5.1 Construction Vehicle Emissions

For POV emissions, it is assumed that an average of 40 workers/day would commute 20 miles each way to the site with no carpooling and a mix of 50 percent of POVs would be Light Duty Gasoline Vehicles and 50 percent would be Light Duty Gasoline Trucks (pick-up trucks/ sport-utility vehicles), working Mondays-Fridays, 52 weeks out of the year.

Most equipment and materials would be delivered to and from the site by large diesel flat-bed trucks. It is estimated that truck trips would increase by 10 round-trips per week (on average) for a 2-year period (or 520 roundtrips per year) at an estimated 40-mile distance each way.

Table 1. Construction Road Vehicle Emissions

Vehicle type	Annual Vehicle Miles	NOx Emission Factor (g/mi)	Tons of NOx annually	VOC Emission Factor (g/mi)	Tons of VOCs annually
Light Duty Gasoline Vehicles	208,000	0.95	0.218	1.36	0.312
Light Duty Gasoline Trucks	208,000	1.22	0.280	1.61	0.369
Heavy Diesel Trucks	20,800	13.43	0.308	1.43	0.033
Total	**436,800**		**0.81**		**0.71**

Source: USEPA, 2005. Notes: g=gram; mi = mile; Conversion factor 1 pound = 453.592 grams.

5.2 Asphalt Paving

Volatile organic compound (VOC) emissions are released during asphalt paving operations. Based on the California Emission Estimator Model, new asphalt emits 2.62 pounds (lbs) of VOCs per acre (SCAQMD, 2011). Assuming that the project would pave 20 acres (including the access road, taxiway, parking lot and mat), this would result in 52.4 lbs of VOCs or 0.26 tons.

5.3 Construction Equipment Emissions

The types of construction equipment by phase, as well as estimated hours of operation, and their associated emissions are provided in Table 2.

Table 2. Diesel Construction Equipment Emissions Worksheet

Equipment Type (quantity)	Total hours of operation	Horse Power	Load Factor	Emission Factor – VOC (g/HP-hour)	Emission Factor – NOx (g/HP-hour)	Emissions (tons) VOC	Emissions (tons) NOx
Site Mobilization (5 days)							
Backhoe (1)	24	77	55	1.4	10.10	0.002	0.01
Site Preparation (30 days)							
Chipping Machine	200	99	37	1.2	8.0	0.01	0.06
Backhoe (3)	600	77	55	1.4	10.10	0.04	0.28
Loader (3)	600	158	54	0.84	10.30	0.05	0.58
Hoeram (3)	600	161	62	1.41	11.01	0.09	0.73
Site/Civil Construction (40 days)							
Hydraulic Excavator	320	183	57	0.70	10.75	0.03	0.40
Loader	320	158	54	0.84	10.3	0.03	0.31
Backhoe	320	77	55	1.4	10.10	0.02	0.15
Hydromulcher	320	35	48	2.23	7.78	0.01	0.05
Tractors	320	214	65	2.46	11.91	0.12	0.58
Roller	320	99	56	0.8	9.30	0.02	0.18
Pneumatic Roller (2)	500	99	56	0.8	9.30	0.02	0.28
Asphalt Paver (2)	500	91	62	0.60	10.30	0.02	0.32
Gas Engine Vibrator	200	56	73	1.41	11.01	0.01	0.10
Building Construction (100 days)							
Hydraulic Excavator	500	183	57	0.7	10.75	0.04	0.62
Crane	800	194	43	1.26	10.30	0.09	0.76
Loader	600	158	54	0.84	10.30	0.05	0.58
Air Compressor	800	37	48	1.20	8.00	0.02	0.13
Scissor Lifts	300	43	46	1.57	14.00	0.01	0.09
Gas Powered Generator	800	11	68	1.20	8.00	0.01	0.05
Totals						**0.692**	**6.26**

Source: USEPA, 1991. Notes: g=gram; HP = horsepower

5.4 Construction Emission Summary

A summary of all construction related emission sources is provided in Table 3.

Table 3. Summary of Construction Emissions

Source	Tons of NOx	Tons of VOCs
Asphalt Paving	0	0.026
Construction Diesel Equipment	6.261	0.692
Construction Vehicles	0.81	0.71
Total in Tons	**7.07**	**1.43**

6.0 Operational Emissions

The operation of the CFA would not increase the overall workforce and the increase in aircraft operations would represent less than 1 percent of the current operations at Lakehurst/Maxfield Field. Subsequently, the sources of NOx and VOC emissions from the operation of the CFA would include the diesel generator and natural gas boiler.

6.1 Generator

The proposed FAF would have one permanent diesel-powered emergency generator for electrical power in times of power outages. The size of the generator is not known but for estimating air emissions, this analysis assumes the same generator size described for the larger NJ Army National Guard Army Aviation Support Facility (7 million British Thermal Units (MMBtu)/hr, 750 kilowatts, 1000 horsepower (HP)). It is also assumed that the generator would run 100 hours per year for both maintenance purposes and power outages. Per EPA's AP-42 guidelines, a large diesel-fired industrial engine emits 3.2 lbs/MMBTU of NOx and 0.09 lbs/MMBTU of VOCs (USEPA, 1996).

*NOx = 7 MMbtu/hr * 100 hrs/year *3.2lbs NOx/MMbtu = 2,240 lbs NOx/year*
*VOCs = 7 MMbtu/hr * 100 hrs/year * 0.09lbs VOCs/MMbtu = 63 lbs VOCs/year*

6.2 Natural Gas Boiler

The design of the facility is underway and the exact sizes and types of heating elements in the building are undecided. However, it is likely that the facility would utilize a natural gas fired boiler for most of its heating needs, as well as indirect gas-fired or heating water type Air Handling Units on the hangar floors, and a domestic hot water heater.

The estimated natural gas fuel consumption for space heat is based on the size of building. Natural gas consumption factors for heating commercial buildings were obtained from the United States Department of Energy *Commercial Buildings Energy Consumption and Expenditures 1992* (USDOE, 1995). The annual natural gas consumption factor for a building 100,001-200,000 sf would be 28.1 standard cubic feet (scf)/sf-year.

Emission factors for natural gas were obtained from *AP-42, Section 1.4, Natural Gas Combustion*. Natural gas emissions from large boiler are: 5.5 lbs of VOCs/1,000,000 scf of natural gas and 100 lbs of NOx/1,000,000 scf of natural gas (USEPA, 2003).

Using these factors, NOx emitted from the boiler would be:

(138,000 sf)(28.1 scf/sf-year)*(100 lbs of NOx/1,000,000 scf) = 388 lbs of NOx/year.*

VOCs emitted from the boiler would be:

(138,000 sf)(28.1 scf/sf-year)*(5.5 lbs of VOCs/1,000,000 scf) = 21.3 lbs of VOCs/year.*

The facility would also include natural gas fired domestic hot water heaters. For this analysis, it is assumed that four (4) 50-gallon hot water heaters would be required.

Assuming a 50 gallon water heater with an average burner firing rate of 69,000 btu/hour, this heater would consume 66 scf of natural gas an hour. Assuming 8,760 hours/year, this would consume 0.58 MMscf/year. Using the same emissions profile as natural gas boilers under AP-42, the annual NOx emissions would be: 0.58 MMscf* 100 lbs NOx/MMscf = 58 lbs NOx/year. The emissions of VOCs would be 0.58 MMscf*5.5 lbs VOCs/MMscf = 3.19 lbs VOCs/year. Multiplying these values by the four water heaters required results in 232 lbs NOx/year and 12.8 lbs VOCs/year.

6.3 Miscellaneous Chemical and Paint Usage

The anticipated use of small quantities of miscellaneous cleaning solvents, and degreasers are expected to result in insignificant emissions, and are therefore not included in this analysis.

The proposed FAF would include a paint booth (nominally 8 feet by 8 feet) for minor painting. This booth would be used to a lesser degree than the current CFA paint booth in Hangar 5. Based on the Hangar 5 paint booth emissions for 2010, the proposed FAF paint booth would emit less than 69 lbs of VOCs annually.

6.4 Operational Annual Emission Summary

A summary of all operations-related emission sources is provided in Table 4.

Table 4. Operational Annual Emissions

Source	Lbs of NOx	Lbs of VOCs
Diesel Generator	2,240	63
Natural Gas Boiler	388	21.3
Natural Gas Water Heaters	232	12.8
Paint Booth	0	69
Total in Pounds	2,860	166
Total in Tons	**1.43**	**0.08**

6.5 Lakehurst SIP Budget Analysis

Table 5 provides the annual stationary, on-road, non-road, aircraft, and test program emissions for operations at Lakehurst. These emissions were derived from annual reports, or as predicted and calculated by their respective program NEPA analysis or NOx and VOC modeling conducted to support the 2006 SIP budget. When the one-time construction and recurring emissions of the proposed CERDEC FAF are added to other Lakehurst emission sources, the Lakehurst SIP budget levels for NOx and VOCs are not exceeded.

Table 5. Lakehurst Emission Sources

Source	NOx (tpy)	VOC (tpy)
Stationary Sources (Title V), 2010	13.57	3.67
C-17 Landing Zone Operations CY 11 and Beyond (Full Operational Capability)	622.48	13.50
Naval Aircraft Testing at the Test Runway (Maximum – Highest Year of JSF Testing)	11.14	0.58
NJ Army National Guard Aviation Support Facility[1]	14.41	7.78
Electromagnetic Aircraft Launching System[1]	7.23	6.75
Other Aircraft and Jet Track Emissions[1]	10.64	12.55
NJ Army National Guard Consolidated Logistics and Training Facility[1]	4.78	4.48
Lakehurst Area Source Emissions[1]	12.09	12.08
Mobile Emissions[1]	1.99	0.85
Non-Road Emissions[1]	33.71	9.40
Annual Emissions	**732.04**	**71.64**
Proposed RRATS construction	0.90	0.21
Proposed Tree Thinning and Removal – one time	0.92	0.09
Proposed LEMV – maximum annual emissions	5.73	6.59
Proposed CERDEC FAF Emissions - Recurring	1.43	0.08
Proposed CERDEC FAF Construction Emissions	7.07	1.43
Total	**748.09**	**80.04**
Lakehurst SIP Budget	**793**	**129**

Source: (1) NAES, 2006.

7.0 Results and Conclusions

The analysis revealed that the Proposed Action would result in annual emission increases of 1.43 tpy of NOx and 0.08 tpy of VOCs. The Proposed Action would also result in a one-time increase of 7.07 tons of NOx and 1.43 tons of VOCs during construction activities. These levels would fall below *de minimis* levels and well below the regionally significant thresholds for NOx and VOCs. When added to the current and proposed construction year Lakehurst emissions, the Proposed Action would not exceed the Lakehurst SIP budget.

Based on the above, this RONA satisfies the General Conformity Rule. As such, this RONA documents the JB MDL's decision not to prepare a written conformity determination for the Proposed Action.

8.0 References

Army CERDEC. 2010. *"FY13 CERDEC Flight Activity Facility, Draft Charrette Report".* December 8, 2010.

Naval Air Engineering Station Lakehurst (NAES) 2006. "*Naval Air Engineering Station 2005 Air Emission Inventory for NOx and VOCs*". Dated April 2006.

State of New Jersey Department of Environmental Protection (NJDEP) 2007. State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards. 8-Hour Ozone Attainment Demonstration Final. Table 6.16 "Rate of Further Progress NJ Portion of Southern New Jersey/Philadelphia Nonattainment Area". October 29, 2007.

South Coast Air Quality Management District (SCAQMD). 2011. "*California Emission Estimator Model, Appendix A – Calculation Details for CALEEMOD*". February 2011.

United States Department of Energy (USDOE). 1995. "*Commercial Buildings Energy Consumption and Expenditures 1992"*. DOE/EIA-0318(92). April 1995.

United States Environmental Protection Agency (USEPA). 1991. EPA 460/3-91-02. "*Nonroad Engine and Vehicle Emission Study – Repor*t". November 1991.

United States Environmental Protection Agency (USEPA). 1996. AP-42, Fifth Edition, Volume I, Chapter 3: Stationary Internal Combustion Engines. Section 3.4. Large Stationary Diesel And All Stationary Dual-fuel Engines. October 1996.

United States Environmental Protection Agency (USEPA). 2003. "*AP-42, Section 1.4, Natural Gas Combustion"*.

United States Environmental Protection Agency (USEPA). 2005. "*Emission Facts. Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks*". EPA420-F-05-022. Office of Transportation and Air Quality. August 2005.

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APPENDIX C

NEWSPAPER PUBLIC NOTICE AFFIDAVITS

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State of New Jersey
County of Burlington } SS.

EHS TECHNOLOGIES
1221 N CHURCH ST. #206
MOORESTOWN, NJ 080571245

7323234396
0006125963-01

Laurie Clark being duly sworn or affirmed according to law, deposes and says that she is the Legal Billing Coordinator of the BURLINGTON TIMES, INC. Publisher of the "Burlington County Times" copy of a notice in such paper on

gust 31, 2011

reto, exactly as in said newspaper

ING CO-ORDINATOR

subscribed to before me day of August 2011 A.D.

Notice of Availability

Draft Environmental Assessment And Draft Finding of No Significant Impact for the Proposed Flight Activity Facility at Joint Base McGuire-Dix-Lakehurst, New Jersey

The JB MDL announces the availability of and invites public comments on the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed Army Communications-Electronics Research, Development and Engineering Command Flight Activity (CFA) Facility. Under the Proposed Action, the CFA would construct a new facility (up to 138,000 sf) on 37 acres adjacent to the Lakehurst Airfield that includes high and low aircraft hangar bays, maintenance and fabrication shops, storage areas, office/meeting space, as well as apron area, a helicopter landing spot and short taxiway. The Draft EA was prepared in accordance with the National Environmental Policy Act. Copies are available for review at the Ocean County Library, 21 Colonial Drive, Manchester, NJ 08759. Written comments should be submitted by October 3, 2011 to Mr. Dennis Blazak, 87 CES/CEA, JB MDL, Hwy 547, Bldg 5, Lakehurst, NJ 08733.

Adv. Fee: $95.40
BCT: August 31, 2011
Aff. Chg. $20.00

Affirmed and subscribed to me before me this 31st day of August 2011 A.D.

Ann Clark
My Commission expires on
May 04, 2015

Affidavit of Publication

State of New Jersey} SS.
MONMOUTH/OCEAN COUNTIES

Personally appeared by Marissa DellaPietro

of the **Asbury Park Press,** a newspaper printed in Freehold, NJ and published in NEPTUNE, in said County and State, and of general circulation in said county, who being duly sworn, deposeth and saith that the advertisement of which the annexed is a true copy, has been published in the said newspaper (1) ONE times, once in each issue, as follows

Wednesday August 31, 2011

2011

CATHERINE M. WILLIAMS
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES JUNE 1, 2012

Sworn and subscribed before me this
31st day of August 2011

Notary Public of New Jersey

Notice of Availability
Draft Environmental Assessment And Draft Finding of No Significant Impact for the Proposed Flight Activity Facility at Joint Base McGuire-Dix-Lakehurst, New Jersey

The JB MDL announces the availability of and invites public comments on the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed Army Communications-Electronics Research, Development and Engineering Command Flight Activity (CFA) Facility. Under the Proposed Action, the CFA would construct a new facility (up to 138,000 sf) on 37 acres adjacent to the Lakehurst Airfield that includes high and low aircraft hangar bays, maintenance and fabrication shops, storage areas, office/meeting space, as well as apron area, a helicopter landing spot and short taxiway. The Draft EA was prepared in accordance with the National Environmental Policy Act. Copies are available for review at the Ocean County Library, 21 Colonial Drive, Manchester, NJ 08759. Written comments should be submitted by October 3, 2011 to Mr. Dennis Blazak, 87 CES/CEA, JB MDL, Hwy 547, Bldg 5, Lakehurst, NJ 08733.

APPENDIX D

PUBLIC COMMENTS AND RESPONSES ON THE DRAFT EA

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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF PERMIT COORDINATION AND ENVIRONMENTAL REVIEW
P.O. Box 420 Mail Code 401-07J Trenton, New Jersey 08625-0420
Telephone Number (609) 292-3600
FAX NUMBER (609) 633-2102

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

September 27, 2011

Mr. Dennis Blazak
87 CES/CEA
Joint Base McGuire-Dix-Lakehurst
Highway 547, Building 5
Lakehurst, NJ 08733

RE: Army Communications-Electronic Research, Development and Engineering Command 5 (CERDEC) Flight Activity (CFA) Flight Activity Facility
Joint Base McGuire-Dix-Lakehurst
Comments on Draft Environmental Assessment

Dear Mr. Blazak:

The New Jersey Department of Environmental Protection's (Department) Office of Permit Coordination and Environmental Review (PCER) distributed for review and comment the Draft Environmental Assessment (EA) for the proposed Army Communications-Electronic Research, Development and Engineering Command 5 (CERDEC) Flight Activity (CFA) Flight Activity Facility at Joint Base McGuire-Dix-Lakehurst. On behalf of the Department, we offer the following comments for consideration.

Air Quality

The Department's Bureau of Air Quality Planning (BAQP) has the following comments. The EA states in regard to methodology that, "Where available, emission factors were obtained from government agency sources including the USEPA and U.S. Department of Energy." The EA also includes Table 2 - Diesel Construction Equipment Worksheet, which lists the emission factors for NOx and VOC (the source listed for this information is the USEPA, 1991). The Draft EA includes Table 1 - Construction Road Vehicle Emissions, which lists the emission factors for NOx and VOC (the source listed for this information is the USEPA, 2005). The EA should indicate the name of the specific source where the above information was obtained. For example, did the emission factors come from the USEPA's Nonroad Model or from another document?

In Results and Conclusions, the EA states, "The increases in emissions are below the de minimis threshold of 50 tpy of VOCs and 100 tpy NOx." Lakehurst has a SIP emission

References are listed in Section 8.0 of Appendix B

budget of 129 tpy of VOC and 793 tpy of NOx. The air emissions from the proposed project should be added to other Lakehurst emissions for the year and the total emissions should be compared to Lakehurst's current SIP VOC and NOx budgets. It is not necessary to compare the air emission increases from the proposed project to the de minimis levels in the Federal General Conformity regulation.

The EA was revised as suggested. SIP analysis was added to App B new Section 6.5.

Land Use Regulations

The Department's Division of Land Use Regulation offers the following remarks:

Freshwater Wetlands – None appear to be mapped with the proposed site, but complete absence of wetlands should be field verified.

Flood Hazard Area Control Act – No mapped regulated drainage features occur within or near the proposed site. This also should be verified.

Coastal Permitting – No coastal permitting is applicable, the Coastal Area Facility Review Act (CAFRA) Zone is about 11,000 feet southeast of the proposed site.

Comments noted.

Cultural Resouces

The Department's Historic Preservation Office (HPO) offers thee following comments. One previously identified historic resource, the Lighter-Than-Air Historic District, is located in the vicinity of the proposed Flight Activity Facility. The historic district was determined eligible for listing in the New Jersey and National Registers of Historic Places on June 27, 1995. Based upon a review of the submitted documentation as well as a visit to the project area by HPO staff on August 11, 2011, the concerns regarding indirect effects expressed in the attached letter have been adequately addressed.

The HPO staff has concluded that the proposed undertaking will have no adverse effect upon the Lighter-Than Air Historic District. They will also be providing comments directly to the military, consistent with this finding, pursuant to Section 106 of the National Historic Preservation Act. If additional consultation with the HPO is needed for this undertaking, please reference the HPO project number 11-1143 in any future calls, emails, or written correspondence in order to expedite our review and response.

Comments noted.

Natural Resources

The Department's Division of Fish & Wildlife (DFW) feels that the information presented in the EA is fairly accurate and agrees with the timing restrictions and mitigative efforts proposed in **2.3.2 Sustainable Design and Construction Best Management Practices** and **3.8 Biological Resources.** The DFW's Endangered and Non-game Species Program would like to be consulted in any mitigative efforts to compensate for minor Pine Snake foraging habitat loss resulting from the construction of the facility. With the Naval Air Engineering Station managing the resources in accordance with the Integrated Natural Resource Management Plan (INRMP), developed in cooperation with the United States Fish and Wildlife Service (USFWS) and the NJ

Comments noted. Design of proposed hibernacula is attached.

DFW, the DFW feels comfortable in concurring with the Finding of No Significant Impact (FONSI) for this project.

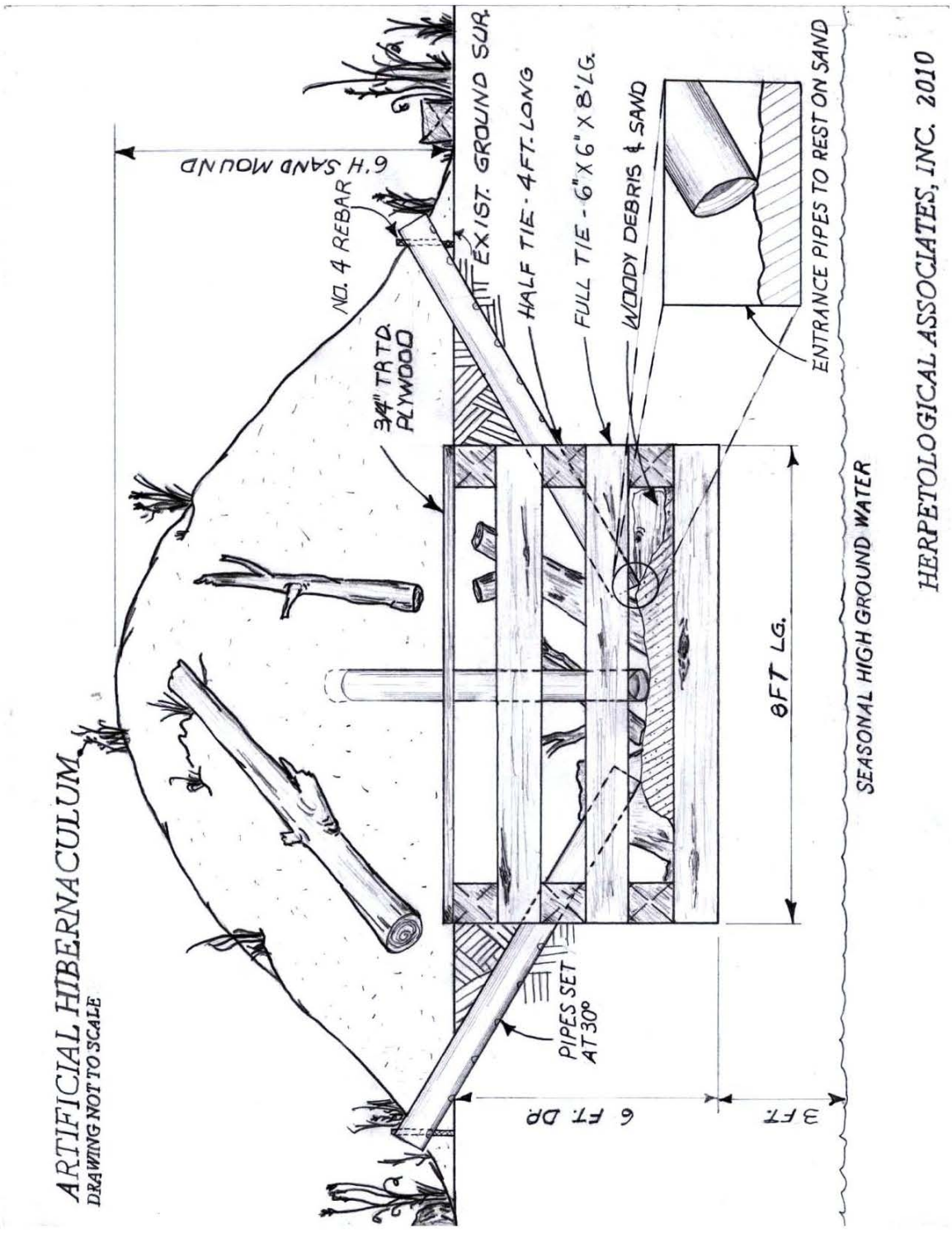
Thank you for giving the New Jersey Department of Environmental Protection the opportunity to comment on the Draft Environmental Assessment for the Joint Base Flight Activity Facility.

Sincerely,

Scott Brubaker

Scott Brubaker, Director
Office of Permit Coordination
and Environmental Review

C: Angela Skowronek, NJDEP–Air Quality Planning
Dave Fanz, NJDEP-Land Use Regulation
Jonathan Kinney, NJDEP-Historic Preservation Office
Kelly Davis, NJDEP-Fish and Wildlife



Design of Artificial Hibernaculum, Herpetological Associates, 2010.

-----Original Message-----
From: Kelly Davis
Sent: Thursday, January 12, 2012 2:34 PM
To: JOYCE, JOHN G GS-12 USAF AMC 87 CES/CEAN
Subject: Re: FW: FW: CERDEC hibernacula

Hi John,
The design of the artificial hibernaculum is fine.
Kelly

Kelly Davis, Ast. Biologist - Fisheries
N.J. Division of Fish and Wildlife - Office of Env. Review
P.O. Box 394, 1255 County Rt. 629
Lebanon, NJ 08833
Tel: (908) 236-2118 Fax: (908) 236-7280

HPO Project # 11-1143-2
HPO-I2011-166

State of New Jersey

MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
PO Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

September 23, 2011

Mr. Dennis Blazak, GS13, DFAC
Deputy Asset Manager, 87th Civil Engineer Squadron
Department of the Air Force
Headquarters Air Mobility Command
Joint Base McGuire-Dix-Lakehurst
Highway 547, Building 5
Lakehurst, NJ 08733-5000

Dear Mr. Blazak:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the Federal Register on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40553-40555), I am providing consultation comments on the following proposed undertaking:

Joint Base McGuire-Dix-Lakehurst
Communications, Electronics Research, Development & Engineering Command
Proposed Flight Activity Facility (FAF)
HPO Project # 11-1143

This letter was prepared in response to an August 30, 2011 letter from Dorothy Peterson, Project Manager with EHS Technologies, Joint Base McGuire-Dix-Lakehurst, asking for HPO review and comment on the draft Environmental Assessment and Finding of No Significant Impact (FONSI) for the above-referenced undertaking. The HPO provided preliminary comments for this undertaking on May 31, 2011 (HPO-E2011-253).

800.4 Identification of Historic Properties

One previously identified historic resource, the Lighter-Than-Air Historic District, is located in the vicinity of the proposed Flight Activity Facility. The historic district was

1

HPO Project # 11-1143-2
HPO-I2011-166

determined eligible for listing in the New Jersey and National Registers of Historic Places in a SHPO Opinion on June 27, 1995.

800.5 Assessment of Adverse Effects

Based upon a review of the submitted documentation as well as a visit to the project area by HPO staff on August 11, 2011, the concerns regarding indirect effects expressed in the HPO's May 31, 2011 letter have been adequately addressed. HPO staff has concluded that the proposed undertaking will have **no adverse effect** upon the Lighter-Than Air Historic District.

If you have any questions regarding this letter, please contact Jonathan Kinney of my staff at (609) 984-0141. If additional consultation with the HPO is needed for this undertaking, please reference the HPO project number 11-1143 in any future calls, emails, or written correspondence in order to expedite our review and response. Thank you.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc:
Dorothy Peterson, EHS Technologies, Joint Base McGuire-Dix-Lakehurst
Ken Koschek, NJDEP-OPCER

-----Original Message-----

From: Brice Obermeyer [mailto:bobermeyer@delawaretribe.org]

Sent: Friday, September 07, 2012 3:26 PM

To: DURYEE, ADRIENNE J CTR USAF AMC 87 CES/CEAN

Subject: Re: Consultation with Joint Base McGuire Dix Lakehurst

Thanks for the EA Adreinne, the Delaware Tribe has no objections to the proposed project.

Brice Obermeyer

Delaware Tribe Historic Preservation Office

1420 C of E Drive - Suite 190

Emporia, KS 66801

(620) 340-0111

From: DURYEE, ADRIENNE J CTR USAF AMC 87 CES/CEAN

[mailto:adrienne.duryee.ctr@us.af.mil]

To: bobermeyer@delawaretribe.org

[mailto:bobermeyer@delawaretribe.org]

Sent: Mon, 27 Aug 2012 11:48:15 -0500

Subject: Consultation with Joint Base McGuire Dix Lakehurst

Hello Dr. Obermeyer,

I am inquiring about another project that you may have been informed about on the Lakehurst are of Joint Base McGuire Dix Lakehurst. An initial coordination letter was sent by Dorothy Peterson to Dee Ketchum on May 13, 2011 informing the Delaware Tribe of new construction in an area that is partially disturbed but has a low potential to contain Native American cultural resources. The undisturbed portion of the project area is not typically in a topographic area that is likely to contain Native American sites. I was informed that you may not have previously received the EA for this project and that you may not have had adequate information to assess the potential for concerns. I am attaching the EA to this email and a copy of the initial coordination letter.

Please let me know if you do have concerns or if you would like additional information on this project.

Thank you very much for your timely consideration!

Sincerely,

Adrienne

Adrienne Lazazzera, Ph.D.

Staff Archaeologist

Contractor (ASN Corporation)

609-562-7358

adrienne.duryee.ctr@us.af.mil

----Original Message-----

From: DURYEE, ADRIENNE J CTR USAF AMC 87 CES/CEAN

Sent: Monday, August 27, 2012 12:35 PM

To: 'tfrancis@delawarenation.com'

Cc: 'CSmith@delawarenation.com'; 'jross@delwarenation.com'

Subject: Consultation on potential cultural resources at Joint Base McGuire Dix Lakehurst

Hello Ms. Francis,

I am inquiring about two projects that are proposed for the Lakehurst area of Joint Base McGuire Dix Lakehurst in Ocean County, New Jersey. The projects, known as "LEMV and CERDEC," include tree clearing and new construction on areas within the Lakehurst area that are mostly disturbed but nevertheless have a potential to contain Native American cultural resources.

LEMV -- In the most recent email communication between Dennis Blazak (of JB MDL) and Cory Smith, June 20, 2012, a copy of the Lakehurst NAES Integrated Cultural Resource Plan and a reconnaissance survey of archaeological potential was forwarded to your office for your review. The LEMV project includes tree clearing within a small parcel that has been previously undisturbed and has the potential (albeit low) to contain Native American cultural resources. I understand that you have a copy of the EA for the LEMV project. I am just wondering whether you needed additional information or time for review. We are requesting confirmation on this project that you have no additional concerns.

CERDEC -- An initial coordination letter was sent from Dorothy Peterson to Bruce Gonzales on May 13, 2011 introducing the project and the impending EA. I understand that the letter may not have been received by the appropriate parties. I also understand that Dennis Blazak corresponded by email in December 2012 with you and Jason Ross and that a copy of the initial invitation letter was also sent via email. I am concerned that you may not have received the letter and/or the EA for the project and that you have not had adequate information to comment on the project. Thus, I am attaching the EA for the project, which includes new construction in an area of low potential for Native American cultural resources. Although much of the area has been previously disturbed and topographically there appears

to be a low potential for archaeological sites, we are inviting the Delaware nation to consult in case you have additional, unforeseen concerns and/or if Native American cultural resources are inadvertently discovered during construction. This project is scheduled to move forward this fall. Please let us know if you do have additional concerns or if you require further information.

Thank you sincerely for the opportunity to consult with the Delaware Nation on these projects and for the opportunity to move further along in establishing a government-to-government relationship with the Delaware Nation. Please do not hesitate to call or email if you would like to discuss these projects in more detail.

Sincerely,

Adrienne Lazazzera Duryee

Adrienne Lazazzera, Ph.D.

Staff Archaeologist

Contractor (ASN Corporation)

609-562-7358

adrienne.duryee.ctr@us.af.mil

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND
JOINT BASE MCGUIRE-DIX-LAKEHURST

6 November 2012

Christopher A. Archer
87th Civil Engineer Squadron
2401 Vandenberg Avenue
Joint Base McGuire-Dix-Lakehurst NJ 08641

Tamara Francis, Cultural Preservation Director
Delaware Nation
P.O. Box 825
Anadarko OK 73005

Dear Ms. Francis

Joint Base McGuire Dix Lakehurst (JB MDL) has received your communication that the Delaware Nation is interested in consulting on individual projects that may have the potential to significantly impact Native American cultural resources. I acknowledge that you have been designated as the appropriate point of contact for this consultation. We thank you for the opportunity to establish a productive working relationship with the Delaware Nation.

JB MDL is proposing to construct a new hangar and adjacent facilities within a portion of the former NAES Lakehurst area that has not previously been disturbed. Although the proposed construction is located in a geographic setting that is unlikely to contain Native American sites, there is a remote possibility of encountering Native American cultural resources that may be of interest to the Delaware Nation. We are, therefore, inviting you to consult with us on potential concerns that you may have so that we can incorporate them in to the early stages of our project planning. A copy of the environmental assessment is enclosed on CD for your review.

The project would consist of high and low aircraft hangar bays, maintenance and fabrication shops, storage areas, and office/meeting space, as well as airfield apron area, a helicopter landing spot, and new taxiway to access the Westfield 06/24 runway. The area was used historically as support facilities (including a goat pasture and attendant stables and farm outbuildings) for the original Navy Proving Grounds (ca. 1919), the majority of which has been previously disturbed. However, additional portions of the area include undisturbed forested areas. No Native American sites have previously been identified in the area and the location is considered to have a low potential to contain as yet unidentified sites.

If you have any interest in or concerns with the proposed project, please contact Mr Kenneth Smith at (609) 562-2189.

Sincerely

CHRISTOPHER A. ARCHER, GS-14, DAF
Deputy Base Civil Engineer

Enclosure
cc:
Mr. Kerry Holton, President

The Delaware Nation
Cultural Preservation Office
31064 State Highway 281~ P.O. Box 825~ Anadarko, OK 73005
Phone: 405/247-2448~ Fax: 405/247-8905

Library ext. 1196
Museum ext. 1180
NAGPRA ext. 1182
Section 106 ext. 1180

Date: 12-17-12

Company: Dept. of the Army JBMDL

TCNS#/County/State: Construction of a helicopter and adjacent facilities. Located within JBMDL, NJ 08641

To Whom It May Concern:

The Delaware Nation received a letter regarding the above referenced project(s). The Delaware Nation is committed to protecting sites important to tribal heritage, culture and religion. Furthermore, the tribe is particularly concerned with archaeological sites that may contain human burials, remains, and associated funerary objects.

As described in your correspondence and upon research of our database(s) and files, we find the Lenape people occupied these areas either historically or prehistorically. However, location of the project does not endanger known sites of interest to the Delaware Nation. Please continue with the project as planned. However, should this project inadvertently uncover an archaeological site or object(s) we request that you immediately contact the appropriate state agencies, as well as the Delaware Nation (within 24 hours). Also, we ask that you halt all construction and ground disturbing activities until the tribe and these state agencies are consulted.

Please note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation. Should you have questions, feel free to contact our offices at 405/247-8903 or by email: tfrancis@delawarenation.com.

Sincerely,

Tamara Francis
Cultural Preservation Director
The Delaware Nation